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THE RELATIONSHIP OF ACADEMIC SELF-EFFICACY AND ETHNIC  
SOCIALIZATION TO MENTAL HEALTH OUTCOMES IN ADOLESCENTS

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in the Graduate School of Duke University



ABSTRACT

(Psychology-Clinical)

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## Abstract

The primary goal of this research was to examine the relationship of academic self-efficacy and ethnicity-related socialization to mental health outcomes in young people. This study relied on a cross sectional survey design to examine the relationship of the independent variables to self-reported symptoms of anxiety, depression, and conduct problems among a sample of middle school students. Correlational analyses, analysis of variance, and hierarchical regression procedures were used to assess the relationship between the independent variables and self-reported symptoms.

Correlational analyses showed that exposure to parental information about proactive strategies for getting along with members of other ethnic groups was positively correlated with academic efficacy. Consistent with the research hypotheses, correlational analyses revealed an inverse relationship between academic self-efficacy and conduct problems. Results also revealed an inverse correlation between efficacy and anxiety. The correlation between efficacy and depression was in the expected direction but was not statistically significant. Ethnic socialization scores also showed an inverse relationship to anxiety and conduct problems, except for exposure to messages of interracial distrust, which was positively correlated with higher levels of internalizing and externalizing distress.

Analysis of variance showed no ethnic differences in self-efficacy perceptions, but gender differences in efficacy favored Caucasian females. Ethnic differences, but no gender differences, were found in exposure to parental socialization messages, with African-American students reporting more frequent exposure to ethnicity-related messages.

Multiple regression analyses indicated that scores on measures of academic efficacy and ethnic socialization predicted symptoms of anxiety and conduct problems. In



unexpected findings, higher levels of academic efficacy predicted lower levels of state anxiety and trait anxiety for African-American males and Caucasian females but were associated with higher levels of anxiety for African-American females and Caucasian males. Furthermore, the independent variables did not predict depressive symptoms.

The findings of this research provide support for the hypothesized inverse relationship between academic efficacy and mental health outcomes. The results also provide support for the utility of academic self-efficacy perceptions and, to a lesser extent, ethnic socialization experiences to predict mental health outcomes among adolescents. Future research and implications for interventions with children are discussed.



Dedicated to my parents,

Dr. Barbara N. Van Horn and Dr. Eugene C. Van Horn





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Academic underachievement is cause for concern among mental health professionals as children who perform poorly in school are at greater risk for psychological disorder and for engaging in behaviors that subsequently lead to negative mental health and medical outcomes (Kellam, Brown, Rubin, & Ensminger, 1983; Dryfoos, 1990; Kellam, Werthamer-Larsson, Dolan, Brown, Mayer, Rebok, Anthony, Laudolff, Edolsohn, & Wheeler 1991; Weissberg, Caplan & Harwood, 1991). Poor school performance is predictive of later problems including delinquency (Johnson, 1979), substance abuse (Elliot, Huizinga & Menard, 1989), unintended pregnancy (Dryfoos, 1990; Weissberg et al., 1991), conduct problems (Weissberg et al., 1991; Kellam, Mayer, Rebok, Hawkins, in press), depression (Kellam, Branch, Agrawal, Ensminger, 1975; Kellam et al., 1983; Cole, 1990; Kellam et al. 1991), and dropout (Boykin, 1983; Dryfoos, 1990). Dryfoos argues that not only are many of the antecedents of poor school performance the same as those for psychological disorders, but they share many of the same consequences as well. While academic underachievement can have significant short-term consequences for children, the negative psychological and psychosocial consequences experienced in childhood can continue to manifest themselves well into adulthood.

Dryfoos (1990) contends that doing poorly in school appears to precede some forms of psychological distress that subsequently put children at risk for irreversible behavioral consequences like engaging in violence, serious delinquency, unintended pregnancy, and dropout. However, there is considerable overlap between poor school performance and psychological problems such that low achievement is both a predictor and consequence of psychological problems, as well as being a problem itself (Dryfoos, 1990; Kellam et al. 1983; Kellam, & Rebok, 1992).

Studies have shown that academic underachievement is linked to depression in children as young as 5 to 6 years of age and that the depressive symptoms are not merely





transient developmental phenomena (Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1993). Over the course of the disorder, children with depressive symptomatology experience decrements in school functioning, while other clinical correlates resemble the same behaviors as manifested by depressed adults, including sad affect, hopelessness, somatic complaints, and suicidal ideation. (Puig-Antich & Weston, 1983; Kazdin, 1988).

Academic underachievement may precede symptoms of mental health problems, but it is also evident that psychological symptoms such as anxiety, depression, and conduct problems frequently co-occur with poor school performance and achievement-related issues. For example, many of the fears and anxieties experienced by children and adolescents are a normal part of development ( Bell-Dolan, Last & Strauss, 1990; Bernstein & Borchardt, 1991) but extreme overconcern about one's competence or evaluation from others in important areas, such as school, are associated with somatic complaints like headaches and stomachaches, fatigue, and concentration problems (Mueller, 1980; Deffenbacher, 1980; Deffenbacher & Hazaleus, 1985; Strauss, Lease, Last, & Francis, 1988). In adolescence, academic underachievement and clinical correlates of depression may co-occur with age-specific behaviors such as substance abuse, sexual promiscuity, irritability and delinquent behavior (Kovacs & Beck, 1977; Carlson & Cantwell, 1980; Ryan, Puig-Antich, Ambrosini, Rabinovich, Robinson, Nelson, Iyengar, & Twomey, 1987). As with anxiety and depression, academic underachievement is linked to antisocial behavior including aggression, theft, vandalism, and truancy among adolescents, which represent serious and pervasive clinical problems (Kazdin, 1987). Children may report symptoms of psychological distress but may not necessarily meet diagnostic criteria for a psychological disorder. However, even the effects of subclinical psychological distress are dramatic and can manifest themselves in school situations with long-term implications for psychological well-being (Bell-Dolan, Last & Strauss, 1990).

In sum then, research suggests that doing poorly in school and expecting to do



poorly in school precede as well as follow negative mental health outcomes such as anxiety, depression, conduct problems, and substance abuse. Given the significant long-term impact of these disorders on psychosocial adjustment, the problems of prevention and intervention to reduce the onset of psychological disorders are serious ones and the role of academic interventions must be considered.

Since school failure has been demonstrably linked to persistent patterns of high risk behavior and psychopathology in childhood, there is increasing support among mental health professionals for focusing on underachievement in intervention and prevention programs (Coie & Krehbiel, 1984; Dryfoos, 1990; Comer, 1985; Weissberg, et al., 1991; Kellam & Rebok, 1992). For example, Coie and Krehbiel (1984) found that academic skills training with low achieving fourth grade children resulted in improvements in reading skills as well as reductions in disruptive classroom behavior. The authors speculated that increased academic competence may have contributed to increased intrinsic motivation and increased persistence with challenging school work, whereas, prior to the intervention, children may have been more likely to be disruptive because they were bored or unsure of their academic capabilities. Longitudinal research has shown that if children are exposed to positive academic experiences, particularly during the preschool and early elementary school years when cognitive skills are being developed, such experiences may act as protective factors to promote healthy psychosocial development in later years. The Consortium for Longitudinal Studies (1983) traced the progress of children involved in a variety of experimental preschool programs in the 1970's. One finding reported by the Consortium suggests that children who participated in the academic programs often showed more adaptive psychosocial outcomes compared to control children. For example, participants showed lower rates of teenage pregnancy and were more likely to have completed high school and found employment (Consortium for Longitudinal Studies, 1983; Maughn, 1988; Haskins, 1989).



Prevention research studies carried out by Kellam and colleagues have found a link between poor reading achievement and depression (Kellam et al., 1991). Results from their epidemiologically-based studies have found that improving academic competence, particularly reading skills, holds promise for preventing the long-term consequences of poor achievement such as aggression and antisocial behavior, depressive symptoms, and possibly depressive disorder (Kellam, et. al., 1991; Kellam, Mayer, Rebok, & Hawkins, in press).

Developmental epidemiological prevention research models propose that preventing school failure should be a target of intervention programs not only aimed at lowering the dropout rate, but those aimed at preventing substance abuse, depression, and conduct problems (Kellam et al., 1991; Kellam & Rebok, 1992). Such prevention efforts have shown that early poor school performance may mediate the development of psychopathology in later years and that antecedents targeted in prevention programs (e.g., academic achievement) do not need to fall within the same domain as developmental outcomes (e.g., depression and substance abuse) in order to create effective primary interventions. In fact, secondary and tertiary psychotherapeutic interventions that do target specific psychological symptoms are not necessarily more effective than prevention efforts in ameliorating symptoms of distress or averting future impairment (Kazdin, 1991).

Developmental epidemiological models have begun to examine mediators and moderators of adaptive psychological well-being versus maladaptive outcomes in efforts to guide the choice of appropriate prevention interventions. Once identified, the hypothesized mediator (e.g., academic achievement) then becomes the target of the intervention aimed at reducing psychopathology in later life (Comer, 1985; Kellam, et al., 1983; Kellam et al., 1991; Coie, Watt, West, Hawkins, Asarnow, Markman, Ramey, Shure, & Long, 1993). Few studies have devoted adequate attention to specific cognitive-motivational processes that may influence mental health outcomes and the effects of



preventive interventions. As one mechanism whereby improvements in academic achievement may be translated into adaptive mental health outcomes, Rutter (1990) proposes that positive school experiences may have protective effects that include promoting self-efficacy which then helps children acquire a sense of their own self-worth and lays the foundation for better adult functioning. However, there is a paucity of information regarding children's perceptions of self-efficacy in academic situations as they relate to psychopathology.

Self-efficacy theory may provide a useful framework in which to examine the relationship between self-referent cognitive processes and mental health outcomes. Self-efficacy perceptions refer to expectations or judgments people make about their ability to perform the behaviors necessary for achieving in specific situations (Bandura, 1977). Bandura's social learning theory suggests that efficacy judgments influence one's choice of activities in that people avoid situations that they believe exceed their capacities and seek out those in which they feel competent (Bandura, 1986). Inefficacious people experience subjective distress and autonomic arousal which lead them to perceive challenging situations as being much more threatening or difficult than they really are. Efficacious individuals, on the other hand, exert greater effort and persistence in confronting challenging tasks. Once self-efficacy is sufficiently strengthened through feedback and mastery experiences, for example, individuals adopt problem-solving approaches to challenging situations in which they focus their attention on figuring out solutions to the problems they encounter (Bandura, 1991). The implications for children with low self-efficacy perceptions are evident. For inefficacious children, overly self-critical attitudes, anticipation of failure, and doubts about their capabilities interfere with the initiation of productive strategies such as studying, planning tasks, and taking challenging classes (Evans & Matthews, 1992). Low self-efficacy beliefs can then lead to serious skill deficiencies as inefficacious children avoid tasks in which they could learn new skills to





cope with difficult academic situations.

Bandura has also suggested that the development of personal efficacy beliefs plays an integral role in healthy psychosocial functioning among children and adolescents (Bandura, 1991). Strong self-efficacy perceptions foster academic motivation (Betz & Hackett, 1986) as well as academic achievement (Hackett, Betz, Casas & Rocha-Singh, 1992). On the other hand, if young people repeatedly experience failure in the classroom or receive aversive feedback from multiple sources of information including parents, peers, and teachers, they may internalize low expectations for success which may undermine perceptions of efficacy and the use of effective problem-solving behaviors. When feedback from important others consistently conveys inadequacy about the child's performance, such threats to one's self-integrity and the erosion of perceptions of efficacy may ultimately lead to failure to accomplish important developmental tasks (e.g., school achievement ) and to disorder.

It is evident that children are able to interpret feedback from teachers, parents, and peers that may put them at risk for academic failure. For example, Phillips (1987) found that highly competent fifth grade children set lower standards for achievement for themselves when they perceived that their teachers expected less of them relative to their equally competent peers. Highly competent children in Phillips' study who believed themselves to be less competent than their peers, were accurate in their perceptions that their teachers held lower expectations for their performance. The self-doubting attitudes that Phillips found among these children were not explained by differences in intellectual capabilities, but rather reflected the internalization of perceived negative judgments about their competence. Research on academic underachievement has shown that when students, particularly female students or African-American students, are exposed to expectations for failure, stereotypes of inferiority, or models of inefficacious coping that are likely to undermine strong efficacy beliefs, they become increasingly vulnerable to self-imposed



limitations on their academic efforts and their aspirations (Rosenthal & Jacobson, 1968; Phillips, 1987; Betz & Hackett, 1986; Eccles, 1987; Steele, 1992). The avoidance of specific developmental tasks or situations, such as academic tasks, can have profound effects on future skill development and, ultimately, life trajectories.

Although self-efficacy perceptions have not been formally assessed in longitudinal research, Maughn (1988) and Rutter (1990) have surmised that academic interventions that provide mastery learning experiences not only promote competence and mastery in academic skills but may avert the development of disorder by promoting feelings of efficacy. A strong sense of personal control or self-efficacy appears to be important in psychological adaptation. Self-efficacy theory, as applied to the academic arena, may offer some guiding principles for understanding how academic efficacy may influence psychological adjustment. As Maddux and Lewis summarize, self-efficacy influences adjustment through its reciprocal impact on goal-setting, persistence toward goals, and cognitive efficiency. They contend that "self-efficacy beliefs are self-confirming because people construct and select environments to maximize receipt of favorable information about themselves and because people selectively attend to and process information about themselves in ways that enhance their sense of control and competence" (Maddux & Lewis, 1995). Moreover, they argue that positive illusions of personal control are adaptive regardless of their accuracy because they serve to maintain a positive self image and lead one to strive for goals that may appear to be beyond one's reach. Overall, theoretical explorations of self-efficacy suggest that self-efficacy in important areas, such as school, is central to healthy psychosocial adjustment (Rutter, 1990; Ehrenberg, Cox & Koopman, 1991) but the specific empirical relationship between academic self-efficacy and mental health outcomes has not been fully explored.

Because school processes tend to mirror the social stratification systems of the larger society (Spencer, Kim & Marshall, 1987), the academic attitudes and efficacy perceptions



of children, particularly minority children, are inextricably linked to their perceptions of the societal value placed on their cultural group (Bowman & Howard, 1985; Spencer, Kim & Marshall, 1987; Mickelson, 1990). Researchers on the impact of social structure and individual responses to blocked opportunity propose that individuals who view themselves as facing barriers to acceptance or advancement within the social structure, because of race or gender for example, may respond with alienation or disidentification from the social system (Finifter, 1972). In some cases, low self-efficacy and lack of persistence in the school arena can represent one manifestation of this alienation along with rejection of an important socialization task, academic learning (Steele, 1992). Some researchers have hypothesized that ethnicity-related socialization can buffer efficacy perceptions from the negative psychological impact associated with demeaning messages from the dominant culture and discriminatory practices that devalue the child's cultural identity (Bowman & Howard, 1985; Greene, 1990). It can be speculated that constructive ethnic socialization messages provided by parents allow some minority children to reaffirm positive views of the self and their capabilities when faced with information and experiences with discrimination that threaten their self-integrity. In their socialization messages, parents may also teach children strategies for coping with non-threatening cross-cultural situations. Spencer (1987) writes that the ways in which parents socialize their children to understand and take pride in their own culture can be a major source of resilience and coping. When the protective functions afforded by such socialization experiences are absent the child's psychosocial adjustment may be jeopardized. If ethnicity-related messages provided by parents do buffer children against negative mental health outcomes, then the protective effects may lie in their self-affirming properties as well as the strategies that they provide.

In general, socialization refers to the process of teaching and learning whereby the behavioral responses of members of a culture or society are narrowed to fall within a socially expected or tolerated range. Costanzo (1992) describes two goals relating to the



socialization process. Socialization serves to establish individuation or distinctiveness in attitudes, preferences, and personality characteristics among the members of the social group. At the same time, socializers instill a sense of social cohesion and social placement within their reference groups. In addition to establishing individual identity and group identity, Boykin's (1983) "triple quandary" view of socialization incorporates a third component that relates to the unique experiences of minority groups where the members of socially oppressed groups develop coping styles, compensatory reactions, and attitudes in response to interactions with the dominant culture. Peters (1988) and Comer and Poussaint (1975) posit that ethnic socialization within families is one mechanism whereby young people are taught to cope with racial barriers and interracial issues. Moreover, from the perspectives of Rotheram and Phinney (1987), ethnic socialization has to do with how children from ethnically distinct groups come to understand the values, norms, and attitudes of their own group, while trying to comprehend the meaning of their own and others' ethnic group membership. For minority children, ethnic socialization not only teaches children about their culture but it provides the child with positive views of the ethnic group that may not be evident in his or her experiences with other cultures.

Bowman and Howard (1985) found that, for African-American students, feelings of personal efficacy were associated with proactive orientations toward racial barriers transmitted by parents. Students who had parents that transmitted a consciousness of ethnic pride and strategic interracial protocol had higher grades than students whose parents did not communicate such proactive strategies. These students also demonstrated a greater sense of personal efficacy over their environment. Bowman and Howard concluded that the intergenerational transmission of proactive orientations toward existing racial barriers (e.g., maintaining racial pride which reaffirms the individual's positive views of himself or herself) is a significant determinant of academic achievement and motivation to strive for upward mobility.





One major task that is unique to minority parents, African-American mothers in particular, involves buffering their children from a hostile environment while teaching bicultural strategies and survival skills for coping with the dominant culture (Boykin, 1983; Peters, 1988; Boyd-Franklin, 1989; Greene, 1990). Nobles (as cited in Greene, 1990) contends that the task of African-American parents is to socialize children to mediate two cultures, the African-American culture and the mainstream culture, which are often in conflict with each other. As Greene (1990) argues, ethnic socialization involves the special task of establishing bicultural competence which enables the child to function in both worlds whether or not the child accepts the values of the mainstream culture. Ethnic socialization takes many forms. Greene writes that parents may moderate discussions with their children that relate to angry feelings after interracial exchanges, racial rejection, or hostility. The parents' experiences with members of their own group and individuals from other ethnic groups can greatly influence the perceptions of social reality that they transmit to their children and the behavioral strategies that parents model and teach their children for coping with the world they live in. Greene (1990) believes that the challenge facing minority parents is to warn their children about discrimination in a way that does not overwhelm the child, make them overly defensive, or foster a reliance on self-defeating strategies for dealing with other ethnic groups. Thus, understanding the role of parental ethnic socialization has particular implications for understanding the psychosocial development of minority children.

In sum then, an important research consideration that emerges from the data on psychological disorders in childhood focuses on cognitively mediated mechanisms and socialization experiences that may mediate or moderate psychological well-being. There is a paucity of research examining whether cognitive-motivational processes and cultural variables can operate to promote feelings of efficacy and healthy psychosocial adjustment among young people, particularly those at increased risk for maladaptive outcomes by



virtue of their membership in impoverished families with inadequate access to economic, social, and political resources (Edelman, 1987; Garbarino, Dubrow, Kostelny, & Pardo, 1992). Such research is warranted in order to elucidate possible intervention strategies aimed at enhancing the psychological well-being of all children.

The present research examines the relationship of two distinct areas, ethnicity-related socialization and academic self-efficacy, to mental health outcomes among adolescents. The study hypothesizes a predictive relationship between the two variables and psychological distress wherein efficacy beliefs and socialization experiences are expected to make independent contributions to mental health outcomes among adolescents. For the purpose of this study, academic self-efficacy refers to students' beliefs that they can mobilize the necessary skills as well as the cognitive and motivational resources required to negotiate the demands of academic tasks. Two dimensions of academic self-efficacy are considered. First, self-efficacy for self-regulated learning refers to students' perceived capability to use a variety of learning strategies including planning and organizing school work, motivating oneself to complete school work, and using cognitive strategies to remember academic information. The second dimension, perceived self-efficacy for academic achievement, refers to students' beliefs in their capability to achieve in specific content areas including math, science, and foreign language instruction (Zimmerman, Bandura & Martinez-Pons, 1992). Ethnic socialization refers to children's exposure to parental messages regarding the child's own ethnic group and constructive strategies for interacting with members of other ethnic groups.

### Specific hypotheses

Four hypotheses were tested in the present study. First, hypotheses about the relationship between self-efficacy, ethnic socialization, and mental health outcomes proposed that stronger perceptions of academic self-efficacy would be associated with fewer symptoms of anxiety and depression as well as with lower frequencies of drug use



and delinquent behavior. Moreover, more frequent exposure to self-affirming parental messages about one's own ethnic group and constructive strategies for getting along with other ethnic groups, was expected to be associated with more adaptive mental health outcomes. Second, it was proposed that higher levels of confidence for academic problem-solving would be positively correlated with parental socialization information regarding bicultural coping strategies, which can be regarded as a problem-solving dimension of ethnic socialization. Third, because adolescents may be exposed to different cultural socialization experiences by virtue of their gender and ethnicity (Ogbu, 1978; Gilligan, 1982; Boykin, 1983; Eccles, 1987), ethnic socialization and academic efficacy were expected to differ according to ethnicity and gender in this sample. Based on the aforementioned research suggesting that females and African-American students may be more frequently exposed to biased teaching practices and stereotypes that weaken their academic confidence, these groups were expected to show lower levels of academic efficacy. Furthermore, previous research suggests that the concept of ethnicity may not be as salient for Caucasian students as it is for non-Caucasian students (Phinney, 1992; Andrews & Lochner, 1898 as cited in Phinney, 1992). Thus, African-American students were expected to show higher rates of exposure to specific ethnicity-related information transmitted by parents. Finally, for all students in the study sample, self-efficacy perceptions and ethnic socialization information transmitted by parents were expected to predict internalizing symptoms of psychological distress such as anxiety and depression, as well as externalizing behaviors such as delinquency and drug use.

## Method

### Design

The present study relied on a cross-sectional design based on survey administration of self-report questionnaires. One independent variable, academic efficacy perceptions, reflected beliefs and attitudes specifically related to performance in the classroom while



the second independent variable, ethnic socialization experiences, related to experiences within the larger societal context. The dependent variables were scores on outcome measures of anxiety, depression, delinquency and drug use. Correlational analyses and multiple regression procedures were used to assess the relationship between the independent variables and mental health outcomes.

In this study, the presence and severity of psychological symptoms, delinquency, and drug use were assessed using a battery of self-report symptom checklists. As Elliot and Ageton (1980) summarize, critics of self-report research challenge the methodological adequacy of self-report techniques and the adequacy of self-report research based on concerns that information about behavior that may be obtained from self-report instruments is often inaccurate and unreliable. However, more recent research has argued that children's reports can be reliable sources of information about symptomatology and, in some cases, they may be more accurate than parent reports, which are often the primary sources of information when assessing psychological symptoms in children. Greater credence has been given to children's reports of subjective symptoms including worries, depressed feelings, somatic complaints, and covert antisocial behaviors which may not be obvious to the parent or may be perceived as less distressing by the parent (Edelbrock, Costello, Dulcan, Kalas & Conover, 1985; Edelbrock, Costello, Dulcan, Conover, & Kalas, 1986; Hodges, Gordon & Lennon, 1990; Silverman, 1991; Herjanic & Reich, 1982).

### Sample

The research sample was drawn from two middle schools in two counties in North Carolina. The schools served primarily low to middle income African-American students which mirrors the racial and socioeconomic composition of the two counties in which the schools were located. The demographic composition of the selected middle schools is reported in Table 1.





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Insert Table 1 about here

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The counties from which the sample was drawn were located in rural to semi-urban areas where the predominant employment opportunities consisted of blue collar and skilled labor positions. Of the 100 counties in North Carolina that were ranked according to median household income in 1990, the two counties from which the sample was drawn were ranked number 72 and 87 (with 100 being the county with the lowest median income). The median household income for each of the two counties was \$28,600 and \$25,200 compared with the average median income of \$35,200 for all North Carolina counties combined (North Carolina State Data Center, 1990).

The participants for this study were 142 students enrolled in grades 6 through 8 at the two middle schools. Subject participants were limited to students enrolled in academic mainstream courses to avoid frustrating learning disabled students who may have had difficulty completing the assessment measures. Five percent of the sample were sixth graders, while seventh and eighth graders comprised 49 % and 46 % of the sample, respectively. The demographic characteristics of the respondents are described in Table 2.

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Insert Table 2 about here

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Seventy-one percent of the study sample were female and 76 % were African-American. The ages of the respondents ranged from 11 years, 5 months to 15 years, 6 months with a mean age of 14 years, 0 months. The mean age for each demographic group is listed in Table 3.



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Insert Table 3 about here

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In order to estimate socioeconomic status, subjects were asked to report the highest level of education attained by each parent or guardian that resided in the home as well as the current occupation of each parent. Ten categories, ranging from "eighth grade or less" to "post-graduate or professional degree" were used to indicate years of education. Fifty-one percent of the mothers had received some high school education with 35 % actually completing high school. Similarly, for fathers, 47 % had received some high school education with 36 % actually receiving a high school diploma. Twenty-nine percent of mothers and 21 % of fathers received some college education with 11 % of mothers and 8 % of fathers actually completing a 4 year college degree. Sixteen percent of the sample reported that they did not know the highest level of education obtained by their mothers, while 28 % of the sample did not report their father's highest level of education either because they did not live with their father or any other male guardian, or because they did not know the highest level of education attained.

Using a categorical occupation scale adapted from Steinberg (1990), students indicated the current occupation of each parent. The majority of the parents were reported to be employed as skilled workers in occupations such as construction, or factory workers. Twenty-five percent of mothers and 42 % of fathers were included in this group. Fifteen percent of mothers were employed in professional/technical positions. Thirty percent of fathers' occupations could not be determined and 14 % of mothers were not working.

To assure that there were no significant differences between the schools on estimators of socioeconomic status, t-test comparisons for the two schools were performed. The schools did not differ significantly from each other on parents' level of education or



occupation. Thus, the samples from the two schools were combined and statistical analyses were performed using the combined samples.

### Measures

Multidimensional Self-Efficacy Scales. Two scales from Bandura's Multidimensional Self-Efficacy Scales were administered to assess children's self-efficacy for achieving in academic situations (Zimmerman, Bandura, & Martinez-Pons, 1992). The two scales ask respondents to rate how well they believe they can perform specific school-related tasks (e.g., finish homework assignments; motivate oneself to do schoolwork) and how well they believe they can achieve in school subjects (e.g., learn science; learn mathematics). The response scale ranges from 1 to 7 where 1 is "not well at all" and 7 is "very well." On the first scale, 11 items assess self-efficacy for self-regulated learning (EFFSR) or the respondent's expectancy that he or she can use a variety of specific learning strategies. Cronbach alpha reliability coefficient of .87 for this subscale suggests high internal consistency. The 9 items of the second scale measure self-efficacy for academic achievement (EFFAA), or the respondent's perceived ability to actually achieve in school subjects. Cronbach alpha of .70 indicates good internal consistency for this subscale (Zimmerman, Bandura, & Martinez-Pons, 1992). Mean scores on each of the scales were used in various analyses.

Ethnic Socialization. The Ethnic Socialization Scale is a 31-item instrument that assesses the frequency of exposure to parental socialization messages (Van Horn, 1994). The items were derived from the existing literature on race-related socialization as well as from theoretical issues raised by studies on ethnic minority children (Bowman & Howard, 1985; Phinney & Rotheram, 1987). Prior to the development of this scale, most of the existing research measures on ethnicity and culture focused on racial identity (Cross 1971, 1985; Baldwin & Bell, 1985; Parham & Helms, 1981). However, no measures existed to assess actual information transmitted by parents to children concerning the



values, beliefs, and attitudes of one's own ethnic group and bicultural strategies for interacting with other ethnic groups.

In the present study, children were asked to indicate how often their parents had actually told them specific themes or behavioral practices relating to their own ethnic group and interacting with other ethnic groups (e.g., "How often have your parents told you: People in our ethnic group should try to get along with people from other ethnic groups?"). The response scale ranges from 1 to 5, with 1 indicating that parents have never communicated such information and 5 indicating that such messages are communicated very often by parents. Mean scores on subscales were used in statistical analyses. The items that comprise the first subscale share a common emphasis on egalitarian treatment and peaceful coexistence among ethnic groups. In contrast, items of the second subscale share a common theme of distrust toward members of other ethnic groups. The third subscale is composed of items tapping affiliation with one's own ethnic group. Items on the fourth subscale relate to ethnic pride, while the fifth subscale consists of items tapping strategic interracial protocol. In a prior statistical analysis of the measure, Cronbach alpha for the overall Ethnic Socialization Scale was found to be .83 indicating very good internal consistency. Analysis of the peaceful coexistence subscale, the distrust subscale, and the collective group orientation subscale revealed alpha coefficients of .78, .79, and .70, respectively. Reliability coefficients for the ethnic pride subscale and the strategic protocol subscale were found to be .77 and .64, respectively (Van Horn, 1994). All of the alpha coefficients indicate good internal consistency.

Revised Children's Manifest Anxiety Scale (RCMAS). To assess chronic anxiety, respondents completed the RCMAS (Reynolds & Richmond, 1978; Reynolds & Richmond, 1985; Reynolds & Paget, 1983). The RCMAS is a 37-item self-report instrument that assesses general worries and anxieties. The measure yields a Total Anxiety Score (TOTAL) based on three subscales: (1) Physiological anxiety, (2) Worry/





Oversensitivity and (3) Social Concerns/ Concentration. The authors report excellent internal consistency as indicated by reliability coefficients greater than .80. The score used in statistical analyses for this study represented the sum of the responses on the RCMAS.

State-Trait Anxiety Inventory (STAI). Because anxiety is a multidimensional construct (Deffenbacher, 1980; Deffenbacher & Hazaleus, 1985; Reynolds & Richmond, 1985), three separate instruments were used to assess these various dimensions. In addition to the RCMAS, the 40 item STAI assessed two other important dimensions (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Twenty of the inventory items tap subjective feelings of tension and autonomic arousal that exist at a given moment in time (STATE). The remaining items assess more enduring personality traits and ways of coping with stressful situations (TRAIT; Spielberger et al., 1983). Compared with the RCMAS, in which the content of the items is specific (e.g., "I worry about what other people will think of me;" "I feel that others don't like the way I do things."), the STAI is more vaguely worded to assess general affective distress (e.g., "I feel inadequate."; "I feel secure."). Although the STAI has been used extensively with adults, the measure is written at a sixth grade reading level and can be readily administered to junior high school students (Spielberger et al., 1983). The two scores obtained for the purpose of analyses represented the sum of scores on the 20 items of each scale. In previous studies, internal consistency was found to be quite high with alpha coefficients of .92 for the state anxiety scale and .90 for the trait anxiety scale (Spielberger et al., 1983).

Self-Reported Delinquency and Drug Use -National Youth Survey (NYS). Items adapted from the NYS (Elliot & Ageton, 1980) were used to assess the frequency with which respondents engaged in delinquent acts, status offenses, and drug use. The NYS encompasses a representative range of delinquent acts that vary in severity. The measure also incorporates a separate category of items assessing hard drug use (e.g., cocaine) and the use of other substances like alcohol and marijuana. In responding to the NYS, students



were asked to provide information on the number of times they had engaged in specific illegal activities within the past year, including drug use, status offenses, and more serious behaviors ranging from petty theft to assault. For this study, the variable used in statistical analyses represented the frequency with which the respondent had used alcohol, used drugs, or engaged in specific delinquent acts. The instrument has been used extensively in a national longitudinal study of youth aged 11 to 17, which makes it appropriate for all of the age groups included in this study. Elliot and Ageton (1980) report excellent internal consistency for the measure with coefficient alpha of .91.

Reynolds Adolescent Depression Scale (RADS). The RADS is a 30-item scale that measures cognitive, vegetative, somatic, and interpersonal symptoms of depression using a four-point likert response scale (Reynolds, 1987). The sum of scores obtained from all 30 items constituted the variable (DEPRESS) used in the statistical analyses. Reliability coefficients reported by Reynolds (1987) range from .92 to .96 indicating that the instrument is an internally consistent measure of depressive symptomatology with adolescent populations.

Demographic Information. In order to describe the sample that took part in the study, respondents were asked to identify their ethnic group (or race), age, grade, and gender. They also provided information about the occupations of each parent or guardian and the highest level of education completed by each parent.

### Procedures

For this study, students in grades 6 through 8 were asked to complete a battery of assessment measures administered on one occasion. Informed written consent was obtained from students and their parents. Students were given consent forms during homeroom in the weeks prior to the administration of the survey and were asked to return signed forms to their homeroom teachers. The survey for this study was distributed to all students who agreed to participate in the study and who also had informed written consent



from a parent or guardian to take part in the study.

Because it was important for students to understand their participation in the research study, they were provided with an introduction to the study. Before completing the survey, students were informed that they were participating in a study of teenagers' attitudes and behaviors and that the study was interested in finding out about attitudes and feelings that students in middle school might have and behaviors they might do. Students were also informed that some questions had to do with attitudes and feelings that most teenagers have experienced while other questions had to do with behaviors the teenagers may or may not have done. Students were told that the purpose of the study was to gather information that can be used to help researchers understand better the kinds of experiences that help children develop into well-adjusted teenagers and adults.

Students were surveyed in small groups during one class period. As students independently completed the questionnaire, they were monitored by undergraduate research assistants. All of the research assistants were African-American and all had previous experience with data collection. The surveys required 45 to 60 minutes to complete and all surveys were collected by the investigator immediately following their completion in order to ensure confidentiality for the participants. The study questionnaire is shown in Appendix A.

## Results

### Descriptive statistics

Prior to performing correlational analyses, analysis of variance, and regression analyses, univariate statistical procedures were carried out in order to describe the characteristics and distributions of the data. Response scores on each of the independent variables and dependent variables were examined to assess normality and skew of the distribution. Univariate statistics revealed that, with the exception of scores on the NYS measure of delinquency and drug use, responses were normally distributed within the



sample. Furthermore, univariate analyses and histograms did not indicate the presence of outliers or extreme scores that could possibly distort statistics. Scores on the NYS were skewed in the positive direction so transformation of the data was performed using a square root transformation. The transformed values of items from the NYS were comprised of the square root of the original value added to the square root of the original value increased by 1 (to avoid values being equal to 0). Transformed scores were then used in the statistical analyses. The univariate characteristics for the transformed and untransformed scores on the measure of delinquency and drug use are shown in Table 4.

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Insert Table 4 about here

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Also prior to performing statistical analyses, intercorrelations between independent variables were examined for evidence of multicollinearity and singularity (Tabachnick & Fidell, 1996). Multicollinearity between the factors comprising the ethnic socialization and self-efficacy scales was evident as indicated by correlations as high as .42. In regression analyses, the presence of multicollinearity can lead to distortions in the data that often make statistical results difficult to interpret. For example, multicollinearity can lead to distortions in the estimation of the magnitudes of the regression coefficients as well as to reversals in their signs (Pedhazur, 1983; Tabachnick & Fidell, 1996). There is no agreement among researchers about what constitutes "high" multicollinearity or remedies for the presence of intercorrelated independent variables. However, Tabachnick and Fidell (1996) and Cohen and Cohen (1983) recommend omitting one of the two redundant variables prior to analysis or creating a composite score from the redundant variables and using the composite score in statistical analyses. The latter option was chosen for this study and composite scores labeled ETHSCORE and EFFO were created for the Ethnic Socialization Scale and the Multidimensional Self-Efficacy Scales, respectively. The self-





efficacy scales were combined and the composite score was the mean score based on all of the self-efficacy items. The composite score for the Ethnic Socialization Scale was also the mean of all items comprising the scale. The composite scores as well as scores obtained from each factor comprising the measured construct were included in the correlational analyses and analysis of variance procedures. However, the variables used to measure ethnic socialization and self-efficacy in regression analyses were limited to the composite scores on each of these measures.

### Factor Analysis

Factor analysis was performed to confirm that the Ethnic Socialization Scale and the academic self-efficacy scales represented multidimensional constructs rather than unidimensional entities within this study sample.

Items of the Ethnic Socialization Scale were factor analyzed using iterated factor analysis. In contrast to a previous factor analysis of the scale which identified five factors, a scree plot for the current factor analysis indicated the presence of a three factor solution. Semipartial correlations were used as estimates of commonalities, or factor loadings, and items that loaded .30 or better on a factor were retained. Based on the .30 criteria, one item was deleted from the scale.

The factor loadings for items that comprised each subscale are reported in Table 5.

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Insert Table 5 about here

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The items that loaded on the first factor emphasized constructive strategies for interacting with members of other ethnic groups and peaceful coexistence among ethnic groups (PROTOCOL). In contrast, the items of the second factor shared a common theme of distrust toward members of other ethnic groups (DISTRUST). The third factor was composed of items tapping ethnic pride and affiliation with one's own ethnic group



(PRIDE). The items that comprise each subscale are shown in Appendix C. As mentioned, previous factor analysis of the Ethnic Socialization Scale revealed five factors: ethnic pride, collective group orientation, distrust, bicultural strategies, and peaceful coexistence (Van Horn, 1994). Two of those factors, bicultural strategies and peaceful coexistence collapsed in the present study to yield one factor, PROTOCOL. Two other factors from the earlier study, collective group orientation and pride, came together to form the PRIDE dimension in the current study. Although there were fewer identified factors in the present research, there was conceptual unity among the factors that were derived.

Factor analysis of the two measures from the Multidimensional Self-Efficacy Scales confirmed the presence of two factors comparable to those identified by Zimmerman, Bandura, and Martinez-Pons (1992). The first factor was comprised of 10 items that assessed self-efficacy for self-regulated learning, or children's perceived confidence to use a variety of learning strategies. The second factor was comprised of 8 items that assessed self-efficacy for academic achievement, or children's perceptions of their ability to succeed in specified content areas. One item from each of the original scales was deleted because of factor loadings less than .30 on both factors. Factor loadings are reported in Table 6 and the items that comprised each scale are presented in Appendix D.

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Insert Table 6 about here

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Overall, factor analysis of the Ethnic Socialization Scale and the Multidimensional Self-Efficacy Scales confirmed the presence of multidimensional constructs. Factor analysis of the Ethnic Socialization Scale revealed fewer factors than had been previously determined, while analysis of the academic-self-efficacy scale was consistent with previously identified factor patterns. In the present study, all of the identified factors



demonstrated conceptual unity for the constructs that they were reported to measure.

### Analysis of Internal Consistency

Cronbach's coefficient alpha was used to assess the extent to which each measure used in this study shows concordance with a common underlying construct. Most of the measures have been used extensively in empirical research with various adolescent populations and have published reliability data supporting the internal consistency of the measures. Analysis of internal consistency was conducted to confirm that the measures can be considered reliable for the sample of adolescents participating in this study. Reliability coefficients are shown in Table 7.

Reliability coefficients were calculated for the Multidimensional Self-Efficacy Scales and the Ethnic Socialization Scale. Similar analyses of internal consistency were made for outcome measures of depression, anxiety, and delinquency/drug use. Alpha coefficients ranged from .76 to .96, indicating good to excellent reliability. Overall, the measures of mental health outcomes appear to reliably assess anxiety, depression, and delinquency/ drug use. Analysis of internal consistency indicates that the independent variables, ethnic socialization and academic self-efficacy, represent unified constructs, as well.

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Insert Table 7 about here

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### Correlational analyses

Intercorrelations among measures of self-efficacy and ethnic socialization are reported in Table 8.



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Insert Table 8 about here

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As shown, exposure to socialization messages espousing constructive strategies for getting along with individuals from other ethnic groups (PROTOCOL) and ethnic pride (PRIDE) were positively related to academic efficacy. However, interracial distrust (DISTRUST) was not related to perceived academic confidence. The moderate relationship between efficacy beliefs and messages about interracial protocol suggests that parental messages about getting along with people from other ethnic groups may provide children with practical strategies that are beneficial to academic outcomes.

To examine the relationship of specific dimensions of self-efficacy and ethnic socialization to self-reported psychological distress, simple correlation coefficients were computed between scores on the measures of independent variables and each of the outcome variables. Correlations are reported in Table 9.

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Insert Table 9 about here

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The correlations between academic self-efficacy and mental health outcomes were in the predicted direction for symptoms of anxiety, depression, and conduct problems. Students with higher perceptions of academic self-efficacy showed significantly fewer symptoms of state anxiety and trait anxiety than students with lower efficacy scores. Similarly, students who were more confident in their ability to use a variety of specific learning strategies and to achieve in classes reported fewer symptoms of depression, but these differences were not significantly different from students with lower self-perceptions of efficacy. The frequency of delinquent acts/ drug use was inversely related to perceptions of efficacy for self-regulated learning but was not related to perceived





competence to achieve in classes. These findings suggest that children in this sample with higher levels of externalizing behavior problems were less confident in their abilities to perform the day to day activities of learning while their confidence in their ability to get good grades was unrelated to their behavior.

When ethnic socialization scores were examined, more frequent exposure to parental messages of distrust of other ethnic groups was significantly, and positively, related to higher levels of internalizing distress and externalizing problem behaviors. In contrast, students who received frequent parental guidance espousing constructive strategies for getting along with individuals from other ethnic groups, showed significantly lower levels of trait anxiety and conduct problems than students with less exposure to such messages.

The correlation between academic efficacy and grade point average was also examined. Students were asked to report the letter grades that they received for each class on their most recent report card. Letter grades were then converted to numerical grade point averages according to the following scale: A=4; B=3; C=2; D=1; F=0. The mean grade point average (GPA) for the sample was 3.30 with a standard deviation of .43. Table 10 shows the correlation coefficients for GPA and the independent and dependent variables.

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Insert Table 10 about here

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Statistical analyses indicated that the correlation between GPA and efficacy for self-regulated learning was significant at the .001 level, while the correlation between GPA and efficacy for academic achievement was significant at the .01 level. Calculation of correlation coefficients between the independent variables and students' self-reported grades suggests a positive relationship between efficacy perceptions and GPA. The



inverse relationship between GPA and trait anxiety as well as the inverse relationship between GPA and conduct problems were also statistically significant. In sum, correlations indicated that GPA was positively related to academic efficacy and negatively related to symptoms of distress. Moreover, GPA was not related to exposure to ethnic socialization themes of pride and strategic interracial protocol but it was inversely related to interracial distrust. While these results are interesting, they should be interpreted with caution because they are based on students' retrospective reports of school grades and a crude estimate of GPA.

### Analysis of Variance

To examine ethnic and gender differences on measures of academic self-efficacy, ethnic socialization, and self-reported psychological distress, analysis of variance procedures (ANOVA) were performed with ethnicity, gender, and the gender x ethnicity interaction as the independent variables. The means and standard deviations for each demographic group are shown in Table 11.

A 2 (gender) x 2 (ethnicity) ANOVA of the independent variables did not reveal gender differences in scores on the overall Ethnic Socialization Scale or its subscales. However, there was a significant main effect for ethnicity for the composite score,  $F(1,138) = 26.26, p < .0001$ ; for PROTOCOL,  $F(1,138) = 7.63, p < .01$ ; for DISTRUST,  $F(1,138) = 7.73, p < .01$ ; and for PRIDE,  $F(1,138) = 52.03, p < .0001$ . As predicted, African-American students scored significantly higher than Caucasians on the composite score and all three subscales, suggesting that African-American parents provide more information about values, beliefs, and experiences related to ethnicity as well as strategies for interacting with other ethnic groups. As can be seen from Table 11, regardless of ethnicity or gender, the highest average scores on the Ethnic Socialization Scale were reported for the protocol subscale while the distrust subscale showed the lowest means. These findings suggest that, although African-American parents and



Caucasian parents tell their children strategies for getting along with other ethnic groups, the majority of parents do not strongly convey hostility or themes of interracial distrust in these messages.

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Insert Table 11 about here

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When academic self-efficacy scores were considered, none of the main effects were statistically significant but a significant gender x ethnicity interaction was found, indicating that Caucasian females showed higher levels of confidence in their ability to use specific learning strategies than all other groups,  $F(1,137) = 5.36, p < .05$ .

A 2 x 2 analysis of variance was carried out for each mental health outcome: depression, chronic anxiety, state anxiety, trait anxiety, and conduct problems/ drug use. ANOVA procedures yielded no significant interactions or main effects for ethnicity or gender on measures of depressive symptoms or anxious symptoms. However, gender differences were found with regard to conduct problems and drug use, with males reporting significantly more externalizing behavior problems than females,  $F(3,132) = 15.39, p < .001$ .

### Regression analyses

The final aim of this study was to determine the extent to which ethnic socialization experiences and perceptions of academic self-efficacy predicted mental health outcomes. Composite scores on the measures of academic self-efficacy and ethnic socialization were selected as the variables to be entered into regression analyses in order to minimize the threat of multicollinearity on regression coefficients which was likely to occur from entering scores from the intercorrelated subscales into the regression models. For each subject, the sum of scores on measures of depression, state anxiety, trait anxiety, and chronic anxiety, constituted four of the dependent variables, while the transformed



mean scores on the NYS constituted the fifth outcome variable.

Standard regression procedures were first used to determine the significance of the overall predictive model. These analyses were followed by hierarchical regression analyses to determine the best fitting and most parsimonious linear model for predicting mental health outcomes as a function of composite scores on measures of ethnic socialization and academic self-efficacy. Both sets of analyses included the demographic variables in the models to control for the effects of ethnicity and gender. The hierarchical analyses included all of the significant predictors from the full model as well as all of the lower order interactions and main effects contained in the highest order interaction retained from the full model. In order to determine the best-fitting and most parsimonious model, effects that were least helpful for explaining the variance accounted for by the hierarchical model were deleted in a stepwise fashion after screening for changes in R-square values across the various models. Regression coefficients ( $B$ , standardized beta coefficients) were then used to graphically illustrate the predictive relationship between each independent variable and the dependent variable with the other independent variable statistically controlled. Hierarchical regression procedures were performed separately for each outcome variable.

#### Prediction of internalizing symptoms

To predict state anxiety, regression analyses were performed with EFFO and ETHSCORE as the independent variables and STATE as the dependent variable. Table 12 and Table 13 display the results of the regression analyses.

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Insert Table 12 about here

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Insert Table 13 about here

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As shown,  $R$  for regression in the full model (.50) was significantly different from 0,  $F(11,124) = 3.73$ ,  $p < .0001$ . In the reduced model, EFFO proved to be a much stronger predictor of state anxiety than was ethnicity related socialization. The correlation between ETHSCORE and STATE was .11, indicating that ETHSCORE predicted only 1 % of the variance in state anxiety scores, while EFFO predicted 24% more variance than ETHSCORE.

Predicted values of state anxiety were plotted for each demographic group using the parameter estimates for EFFO and ETHSCORE obtained from the reduced model. The resulting regression lines presented in Figure 1 show that, when ethnic socialization is controlled, higher levels of academic self-efficacy predicted lower levels of state anxiety only for Caucasian females and African-American males. Increased efficacy was associated with higher state anxiety in the other two groups. Figure 2 shows that ethnic socialization was positively related to state anxiety for all groups but was not a statistically significant predictor of anxiety.

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Insert Figure 1 about here

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Insert Figure 2 about here

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Table 14 shows the predicted mean scores for state anxiety for each demographic group. When the least squares means were examined there were no statistically significant differences between groups.

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Insert Table 14 about here

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The regression analyses for the prediction of trait anxiety show results similar to the models for state anxiety. In the test of the full model,  $R$  for regression was significantly different from 0,  $F(11, 122) = 3.98$ ,  $p < .0001$ .  $R$ -square was .26. In the reduced model EFFO was a significant predictor of trait anxiety ( $B = -.89$ ,  $p < .001$ ), while ETHSCORE was not ( $B = 1.96$ ,  $p = .12$ ). The correlation between ETHSCORE and TRAIT was .07 which, when squared, indicated that ETHSCORE accounted for less than 1 % of the variance in trait anxiety scores, leaving the remaining 25 % to be accounted for by EFFO. Higher levels of efficacy predicted lower levels of anxiety for Caucasian females and African-American males, but the opposite relationship was true for Caucasian males and African-American females.

As with state anxiety, ETHSCORE showed a positive relationship with trait anxiety when the effects of efficacy were statistically controlled. The resulting regression lines are shown in Figure 3 and Figure 4.

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Insert Figure 3 about here

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Insert Figure 4 about here

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Table 15 shows the predicted mean values for each demographic group. No statistically significant differences were predicted.

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Insert Table 15 about here

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A standard multiple regression was conducted with TOTAL as the dependent variable to assess the predictive relationship of EFFO and ETHSCORE to chronic anxiety.



The overall F test was significant,  $F(11, 129) = 2.72, p < .01$  with  $R\text{-square} = .19$ . As shown in Table 13, ETHSCORE was significant in the reduced model, which accounted for 16 % of the variance in TOTAL scores,  $F(8, 132) = 3.18, p < .01$ . The regression lines displayed in Figure 5 and Figure 6 show that higher ethnic socialization scores were associated with lower levels of anxiety for African-American males, Caucasian males, and African-American females, but with higher levels of anxiety for Caucasian females.

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Insert Figure 5 about here

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Insert Figure 6 about here

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Efficacy negatively predicted anxiety but this predictive relationship was marginally significant ( $B = -1.12, p = .07$ ). Examination of least squares means in Table 16 showed that the predicted value of TOTAL scores was highest for Caucasian females which was significantly different from all other groups.

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Insert Table 16 about here

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Overall, regression analyses showed that higher levels of academic efficacy predicted lower levels of state anxiety and trait anxiety for African-American males and Caucasian females but were associated with higher levels of state anxiety for African-American females and Caucasian males. The correlations between STATE and ETHSCORE and between TRAIT and ETHSCORE were nearly zero, indicating that almost all of the variance in state anxiety scores and trait anxiety scores was predicted by EFFO after demographic variables were controlled, (approximately 24% to 25% in each



model). For all groups, ETHSCORE was a weaker predictor of more general affective distress, as measured by the STAI. However, it was a better predictor of chronic anxiety as measured by the Revised Children's Manifest Anxiety Scale, which taps more specific worries, social concerns, and somatic complaints.

Multiple regression analyses using DEPRESS as the independent variable revealed that the overall  $F$  test was not significant at the .05 level, indicating that neither ETHSCORE nor EFFT was predictive of self-reported depressive symptoms,  $F(11, 128) = 1.12, p = .38$ .

#### Prediction of externalizing symptoms

A standard multiple regression was performed with CD as the dependent variable to examine the extent to which ETHSCORE and EFFT predicted externalizing problems. The  $R$  value of .47 ( $R$ -square = .22) obtained from the overall test of the full model for CD was significantly different from 0,  $F(11, 124) = 3.24, p < .001$ . However, neither EFFT ( $B = -.41, p = .12$ ), ETHSCORE ( $B = .00, p = .99$ ), nor any of the demographic variables reached significance in the model. Hierarchical regression analyses were then performed separately for EFFT and ETHSCORE. When ETHSCORE was deleted from the model, the  $R$  was significantly different from 0,  $F(7, 128) = 5.11, p < .0001$  and  $R$ -square was .22. EFFT was not statistically significant in this model ( $B = -.41, p = .11$ ); however, when the effects of the ethnicity  $\times$  efficacy interaction and the sex  $\times$  ethnicity  $\times$  efficacy interaction were removed, the regression coefficient for EFFT was significant,  $F(5, 130) = 6.95, p < .0001$  ( $B = -.19, p < .05$ ). EFFT predicted 10 % of the variance in CD scores (as measured by the mean CD score transformed by the square root function) with the remainder of the variance explained by demographic factors.

Least squares means shown in Table 17 were significantly different between African-American males and Caucasian females as well as between African-American males and African-American females.





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Insert Table 17 about here

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Figure 7 displays the regression lines predicted from the relationship of EFFO to CD. As shown, EFFO negatively predicted CD for all groups.

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Insert Figure 7 about here

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Figure 8 displays the regression lines predicted by ETHSCORE. The overall F test of ETHSCORE was significantly different from 0,  $F(7, 129) = 2.45$ ,  $p < .05$  but ETHSCORE was not significantly predictive of CD in the overall model or in any subsequent hierarchical regression analyses when demographic factors were controlled, ( $B = .07$ ,  $p = .78$ ).

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Insert Figure 8 about here

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Least squares means for predicted values of CD are shown in Table 18. Once again, significant differences in the predicted values of conduct problems were found between African-American males and Caucasian females, as well as between African-American females and African-American males.

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Insert Table 18 about here

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## Discussion

The results of this study provide some support for the hypothesis that academic self-efficacy perceptions and ethnic socialization experiences predict mental health



outcomes among adolescents. Efficacy predicted better outcomes on measures of conduct problems for all demographic groups but was not significantly predictive of chronic anxiety. At the same time, the hypothesis that ethnicity related socialization would negatively predict psychological distress was primarily supported for chronic anxiety; children with higher socialization scores were less anxious. One unexpected finding showed that stronger efficacy perceptions were associated with higher levels of state anxiety and trait anxiety for African-American females and Caucasian males. Not only were they experiencing more affective distress while completing the research survey (state anxiety) but they also endorsed more enduring elevations in negative affect (trait anxiety). Researchers have found that moderate levels of arousal can be motivating (Hasher & Zacks, 1979) and it can be speculated that, among the efficacious students in the study sample, the higher levels of anxiety may be related to increased motivation to engage in performance efforts. Higher levels of anxiety among more academically confident students may also reflect perfectionistic tendencies on performance tasks. Two other hypotheses are also plausible. First, it is possible that more academically confident students are more aware of the attitudes of some lower achieving peers who denigrate academic effort and success (Eccles, 1987), possibly leading to chronic affective distress. Second, more efficacious students may experience negative affect associated with striving to achieve higher goals and standards for themselves in important domains when they may or may not have the skills to do so. Along these lines, Schunk contends that self-efficacy is not synonymous with skill or one's actual capacity to achieve. It appears to serve as a mediator of determining whether a person, given adequate skills, will be motivated to engage in and persist with the effective use of problem-solving strategies when faced with challenging situations. (Schunk, 1991; 1996). These hypotheses regarding the unexpected inverse relationship between efficacy and state anxiety and trait anxiety are speculative and should be explored in future research.



The finding that neither ethnic socialization nor academic self-efficacy was predictive of depressive symptoms was both surprising and interesting. It is possible that, for some children, factors other than academic confidence are more important determinants of depression. In an examination of the causal relationship between depressive symptoms, academic competence, and social competence, Cole, Martin, Powers and Truglio (1996) found that, over a six-month period, academic competence did not predict distress in third through sixth grade children while social competence was predictive of depressive symptoms. The researchers concluded that, for some children, depression may be more strongly related to competence in areas other than in the academic arena (e.g., athletic abilities, social abilities).

It should be noted that, even when the independent variables in this study predicted outcomes as expected, a major portion of the variance in self-reported psychological distress was not explained by self-efficacy and ethnic socialization. Given that psychopathology is multidetermined by a complex array of individual, biological, familial, and social influences the variance explained by one or two factors is likely to be small. It is also possible that more complex statistical procedures to address issues of multicollinearity may have produced different results.

The results from this study provide support for the hypothesized correlation between academic efficacy and mental health outcomes as well as between ethnicity-related socialization and efficacy. Overall, correlational analyses supported the hypothesis that self-efficacy beliefs would be inversely correlated with mental health outcomes among the adolescents in this sample. Correlations between self-efficacy and exposure to messages of distrust were statistically significant for internalizing and externalizing symptoms of distress, while the relationship between exposure to information about strategic interracial protocol and outcomes was most evident for externalized problem behaviors. Taken together, these analyses suggest that students in this sample who were



more confident in their ability to use specific learning strategies and those who were provided with strategies for getting along with members of other ethnic groups were less likely to use drugs or engage in behaviors that violate the rights of others. In contrast, students who are exposed to more frequent messages of interracial distrust and hostility showed higher rates of internalized distress as well as conduct problems.

Contrary to stated research hypotheses and published research suggesting that female students and minority students are more frequently exposed to biased practices in the classroom and expectations that may undermine strong efficacy beliefs, no consistent ethnic differences were found in self-efficacy perceptions. Furthermore, Caucasian females showed the highest levels of academic efficacy among the demographic groups that were compared. The findings of this research do not invalidate previous contentions that females and minority students are exposed to socialization experiences that may undermine efficacy perceptions. Rather, this examination of cognitive-motivational factors and socialization experiences may highlight the need for future research to explore how it is that psychological mechanisms and certain experiences with socializing agents, which may not be unique to either gender or any particular ethnic group, are translated into healthy outcomes versus deviant developmental trajectories.

This study suggests that cognitively mediated mechanisms such as self-efficacy may be useful predictors of internalizing and externalizing problems and ones that may be targeted in prevention interventions aimed at ameliorating risk for maladaptive mental health outcomes. Based on the finding that self-efficacy differentially predicted outcomes in anxiety, this may highlight the need for intervention research to consider cognitive-motivational variables that may impact on research outcomes in ways that may allow certain subgroups of subjects to benefit from intervention strategies (e.g., academic interventions) more than other groups, rather than the intervention having a uniform impact on all groups. It is equally important to consider whether, because of cognitive-





motivational factors or socialization experiences, some subgroups of participants may be negatively affected by interventions (e.g., increased performance anxiety).

While some of the research hypotheses were clearly supported, other hypotheses received only weak support. Contrary to the stated hypotheses, mental health outcomes were not found to be strongly predicted by parental ethnic socialization experiences. It is possible that, with the use of the composite ethnic socialization score in the regression analyses, the distrust dimension may have been more influential in the regression analyses than the other socialization dimensions because of its strong positive correlation with each of the mental health outcomes. The weak relationship of parental ethnic socialization to mental health outcomes may also suggest that, in middle school, the influence of socialization messages from the peer group, the mass media, or other socializing agents may be more influential to mental health outcomes.

As expected, ethnic differences in exposure to parental socialization messages were found. Most African-American as well as Caucasian children received messages about proactive strategies for getting along with members of other ethnic groups. However, the low prevalence of other themes (e.g., ethnic pride and collective group orientation) among Caucasian students was consistent with previous research suggesting that the concept of ethnicity and ethnic group membership may not be as salient for Caucasian adolescents as it is for minority adolescents (Phinney, 1992; Andrews & Lochner, 1989 as cited in Phinney, 1992). Although ethnic differences in socialization experiences were found, gender differences were not found in the frequency of exposure to socialization messages from parents, suggesting that parents do not provide different messages to male children versus female children.

#### Clinical and research implications

The findings from this study have important implications for interventions with children and prevention research in particular. First of all, factor analysis procedures



elucidated the multidimensionality of cognitive-mediating mechanisms such as academic efficacy perceptions and children's perceptions of socialization messages transmitted by parents. Thus, the findings of this study suggest that the predictive relationship of efficacy and socialization to mental health outcomes not only varies according to the socialization dimension being considered, but also depends on the mental health outcome that is being considered.

Second, an important question that emerges from this research is whether designing specific preventive intervention efforts to enhance academic self-efficacy can foster levels of psychological resilience above and beyond what is afforded by skills-based interventions alone (e.g., improving reading skills) or interventions to improve social competence. Zimmerman, Bandura, and Martinez-Pons (1992) contend that interventions aimed at improving achievement need to structure academic experiences in ways that enhance the student's sense of academic efficacy. Research has shown that within the context of academic interventions, the direct facilitation of self-efficacy through mastery learning experiences, proximal goal setting, ability and strategy feedback, and modeling can lead to increased persistence, enhanced performance, and greater intrinsic interest in academic activities (Schunk, 1991; Kendall & Braswell; Bandura & Schunk, 1981; Schunk 1986).

#### Methodological limitations

Some limitations of this study with regard to sample and methodology must be acknowledged. First of all, the cross-sectional methodology limits the inferences that can be made about the causal relationship between academic attitudes, ethnic socialization, and mental health outcomes. It will be important for more extensive investigations of academic self-efficacy and ethnicity related socialization to begin earlier (e.g., at the time of school entry) and continue into adolescence, which could reveal qualitatively different patterns that vary with age. Second, the research participants were not randomly selected



for this study and the possibility of selection bias must be acknowledged. Future replications with larger, randomly selected samples will be necessary to confirm the findings of this study. Third, unlike larger studies which typically assess psychopathology using self-report information along with parent reports, teacher ratings, and peer nominations, the interpretations of findings are limited by over-reliance on one source of information. Moreover, self reports of symptoms of distress did not necessarily reflect clinically significant phenomena or disorders of anxiety, depression, conduct disorder and substance abuse. Self-report measures provide valuable information about the subjective aspects of internalizing and externalizing psychological symptoms, many of which may be difficult to assess by other means (e.g. suicidal ideation, somatic complaints, covert behavior). However, it is possible that different results could emerge regarding the relationship between self-efficacy, ethnic socialization, and psychological symptoms if reports from multiple informants about symptoms are used to measure disorder and more formal indices of disorder are included.

### Future Research

While psychological research has produced a wealth of data on deviant developmental trajectories and environmental risk factors that lead to adverse mental health outcomes, there is a paucity of empirical research examining the factors that promote feelings of efficacy and healthy psychosocial development. The present study tested the predictive relationship of academic self-efficacy and socialization experiences to psychological distress and was an initial attempt to shed light on possible multidimensional processes that may predict a variety of outcomes.

The findings from this study open the door for future avenues of research and possibly preventive intervention trials wherein cognitive variables, such as self efficacy, are hypothesized to relate to mental health outcomes. Within this line of research a hypothesized mediator (self-efficacy) becomes the proximal target of the intervention trial



with the distal target being later symptoms of psychopathology (Kellam, et al. 1991). Replication of this study using larger, more ethnically diverse samples is needed to confirm the predictive utility of ethnic socialization experiences and self-efficacy perceptions. It will also be important to consider the extent to which self-efficacy predicts mental health outcomes over time and the stability of self-efficacy across time for children. Causal modeling studies using multiple sources of information and a longitudinal design may also help clarify the relationship of self-efficacy to mental health outcomes and academic achievement.





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Table 1

Demographic Characteristics of Study Schools

Middle school 1	Middle school 2
95% African-American	62% African-American
5% Caucasian	38% Caucasian
49% Female	50% Female
51% Male	50% Male
Total = 502 students	Total = 353 students



Table 2

Demographic Characteristics of Study Sample (N=142)

African-American (n=109)		Caucasian (n=33)	
Male	Female	Male	Female
n=26	n=83	n=15	n=18
(18%)	(58%)	(11%)	(13%)



Table 3

Mean Age For Each Demographic Group (years).

African-American (n=109)		Caucasian (n=33)	
Male	Female	Male	Female
14.35	13.80	13.90	13.61



Table 4

Description of Untransformed and Transformed Data Distributions for  
Delinquency Scores (CD)

	Untransformed	Transformed
Mean	.53	1.80
Standard deviation	.70	.67
Skewness	2.02	1.15
Kurtosis	3.72	.84





Table 5

Factor Structure: Ethnic Socialization Items (Semipartial Correlations)

<b>ITEM</b>	<b>FACTOR 1</b>	<b>FACTOR 2</b>	<b>FACTOR 3</b>
ES19	<b>.62</b>	-.16	-.07
ES13	<b>.62</b>	.14	-.09
ES4	<b>.59</b>	-.02	.08
ES2	<b>.57</b>	-.03	-.00
ES3	<b>.51</b>	-.10	.11
ES14	<b>.50</b>	-.12	.08
ES9	<b>.48</b>	.23	-.13
ES6	<b>.48</b>	-.02	.08
ES20	<b>.45</b>	-.14	.11
ES15	<b>.43</b>	.15	.02
ES18	<b>.39</b>	.06	.09
ES1	<b>.38</b>	.02	.03
ES29	<b>.35</b>	.10	.18
ES21	-.07	<b>.79</b>	-.07
ES22	-.04	<b>.64</b>	.05
ES24	-.05	<b>.61</b>	.08
ES12	-.09	<b>.60</b>	-.06
ES11	-.08	<b>.59</b>	.07
ES30	.06	<b>.56</b>	.03
ES31	.05	<b>.53</b>	.01
ES17	.03	<b>.48</b>	.23
ES23	.35	<b>.39</b>	.11
ES8	.01	<b>.38</b>	.16



Table 5 (continued)

Factor Structure: Ethnic Socialization Items (Semipartial Correlations)

<b>ITEM</b>	<b>FACTOR 1</b>	<b>FACTOR 2</b>	<b>FACTOR 3</b>
*ES10	.12	.25	.07
ES27	.07	-.02	<b>.70</b>
ES25	-.03	-.03	<b>.69</b>
ES28	.03	.04	<b>.54</b>
ES26	.17	.01	<b>.47</b>
ES5	-.12	.25	<b>.34</b>
ES16	.05	.29	<b>.33</b>
ES7	.00	.29	<b>.30</b>

\* indicates item deleted from scale



Table 6

Factor Structure: Multidimensional Self-Efficacy Scales(Semipartial Correlations)

ITEM	FACTOR 1	FACTOR 2
EFFICACY 6	.64	-.09
EFFICACY 2	.63	-.20
EFFICACY 4	.62	-.05
EFFICACY 3	.60	.04
EFFICACY 7	.56	.07
EFFICACY 8	.55	.09
EFFICACY 10	.53	.12
EFFICACY 9	.45	.11
EFFICACY 5	.45	.10
EFFICACY 1	.36	.14
EFFICACY 19	.11	.56
EFFICACY 18	.01	.53
EFFICACY 15	.09	.52
EFFICACY 12	.01	.47
EFFICACY 14	-.12	.45
EFFICACY 17	-.05	.42
EFFICACY 13	.11	.36
EFFICACY 16	.01	.30
*EFFICACY 20	.11	.27
*EFFICACY 11	.20	.22

\* indicates item deleted from scale



Table 7

Psychometric Data for Measures of Self-Efficacy, Ethnic Socialization, and Outcome Variables

Variable	No. of items	M	SD	Cronbach's alpha
Multidimensional Self-Efficacy Scale	18	5.03	.89	.87
Efficacy for self-regulated learning	10	4.83	1.07	.87
Efficacy for academic achievement	8	5.28	.97	.76
Ethnic Socialization Scale	30	3.14	.65	.89
Protocol	13	3.68	.78	.87
Pride	10	3.12	.96	.82
Distrust	7	2.29	.91	.85
Revised Children's Manifest Anxiety Scale	37	11.58	6.10	.86
State-Trait Anxiety Inventory-state anxiety	20	45.45	5.99	.86
State-Trait Anxiety Inventory-trait anxiety	20	46.70	8.54	.86
Reynolds Adolescent Depression Scale	30	63.68	16.97	.92
National Youth Survey	41	7.66	5.24	.96





Table 8

Intercorrelations Between Independent Variables (N=142)

	EFFO	EFFSR	EFFAA	ETHSCORE	PRIDE	PROTOCOL	DISTRUST
1. EFFO	---						
2. EFFSR	.90****	---					
3. EFFAA	.80****	.46****	---				
4. ETHSCORE	.28***	.30***	.15	---			
5. PRIDE	.17*	.14	.15	.81****	--		
6. PROTOCOL	.41****	.42****	.25**	.79****	.48****	---	
7. DISTRUST	-.01	.05	-.09	.69****	.49****	.21**	--

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; \*\*\*\* $p < .0001$



Table 9

Intercorrelations Between Independent Variables and Dependent Variables (N=142)

Indep. var.	Dependent var.				
	STATE	TRAIT	TOTAL	DEPRESS	CD
1. EFFO	-.36****	-.36****	-.16	-.13	-.31***
2. EFFSR	-.33****	-.33****	-.13	-.15	-.37****
3. EFFAA	-.27**	-.27**	-.14	-.06	-.12
4. ETHSCORE	.11	.07	.12	.09	-.01
5. PRIDE	.12	.08	.14	.10	-.07-
6. PROTOCOL	-.13	-.18*	-.03	-.10	-.24**
7. DISTRUST	.33****	.33****	.22**	.24**	.22**

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; \*\*\*\*  $p < .0001$



Table 10

Correlations of Grade Point Average (GPA) with Ethnic Socialization,  
Academic Efficacy, and Mental Health Outcomes (N= 132)

Independent Variables	Correlation with GPA
EFFO	.32***
EFFSR	.28***
EFFAA	.27**
ETHSCORE	.01
PRIDE	.06
PROTOCOL	.16
DISTRUST	-.23**
Dependent Variables	
STATE	-.11
TRAIT	-.22**
TOTAL	-.14
DEPRESS	-.11
CD	-.25**

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$



Table 11

Means and Standard Deviations for Academic Self-Efficacy, Ethnic Socialization, and Outcome Measures of Psychological Symptoms

Variable	African-American				Caucasian			
	Male (n=26)		Female (n=83)		Male (n=15)		Female (n=18)	
	M	SD	M	SD	M	SD	M	SD
TOTAL (anxiety)	9.54	6.91	12.10	5.77	11.93	4.10	11.83	7.51
STATE	38.31	13.00	42.95	9.77	43.77	7.38	37.06	12.53
TRAIT	39.76	11.77	44.01	9.63	45.46	9.74	39.18	13.22
DEPRESS	61.92	16.23	65.02	16.79	61.43	18.59	61.78	18.43
CD	2.13 <sup>A</sup>	.93	1.75 <sup>B</sup>	.59	2.02 <sup>A</sup>	.53	.42 <sup>B</sup>	.39
EFFO	5.13	.91	5.02	.92	4.46	.81	5.34	.79
EFFSR	4.79 <sup>B</sup>	1.13	4.78 <sup>B</sup>	1.09	4.08 <sup>B</sup>	1.15	5.25 <sup>A</sup>	.97
EFFAA	5.54	.99	5.33	1.04	4.93	.84	5.46	.77
ETHSCORE	3.32 <sup>A</sup>	.46	3.28 <sup>A</sup>	.62	2.69 <sup>B</sup>	.71	2.64 <sup>B</sup>	.58
PROTOCOL	3.79 <sup>A</sup>	.63	3.77 <sup>A</sup>	.75	3.24 <sup>B</sup>	.95	3.44 <sup>B</sup>	.87
PRIDE	3.51 <sup>A</sup>	.90	3.37 <sup>A</sup>	.81	2.42 <sup>B</sup>	.69	2.02 <sup>B</sup>	.79
DISTRUST	2.39 <sup>A</sup>	.89	2.42 <sup>A</sup>	.92	1.99 <sup>B</sup>	.79	1.80 <sup>B</sup>	.78

Means with different superscripts are significantly different at the .05 level.





Table 12

Standard multiple regression of efficacy and ethnic socialization on outcome variables

Full Models	F	df	R <sup>2</sup>	R	Adj. R <sup>2</sup>
STATE	3.73****	11, 124	.25	.50	.18
TRAIT	3.98****	11, 122	.26	.51	.20
TOTAL	2.72**	11, 129	.19	.44	.12
DEPRESS	1.12	11, 128	.09	.30	.01
CD	3.24***	11, 124	.22	.47	.15

\*\*  $p < .01$ ; \*\*\*  $p < .001$ ; \*\*\*\*  $p < .0001$



Table 13

Hierarchical regression models of efficacy and ethnic socialization on outcome variables

Reduced models	F	df	R <sup>2</sup>	R	B	<i>B</i>	pr <sup>2</sup>	sr <sup>2</sup>
STATE	5.01****	8, 127	.24	.49	--	--	--	--
1. EFFO	19.18****	1, 134	.13	.35	-8.97	-.75**	.07	.13
2. ETHSCORE	13.9****	2, 133	.17	.41	2.72	.17	.02	.05
TRAIT	5.03****	8, 125	.24	.49	--	--	--	--
1. EFFO	19.30****	1, 132	.13	.36	-10.44	-.89**	.09	.13
2. ETHSCORE	12.33****	2, 131	.16	.40	1.96	.12	.01	.03
TOTAL	3.18**	8, 132	.16	.40	--	--	--	--
1.EFFO	3.57	1, 139	.02	.14	-1.12	-.16	.03	.03
2.ETHSCORE	4.07*	2, 138	.06	.24	8.44	.90**	.09	.03
CD	5.11****	7, 128	.22	.47	--	--	--	--
1. EFFO	6.95****	5, 130	.21	.46	-.14	-.19*	.03	
1.ETHSCORE	2.45*	7, 129	.12	.35	.07	.07	.00	.00

\*p &lt; .05; \*\* p &lt; .01; \*\*\*p &lt; .001; \*\*\*\*p &lt; .0001



Table 14

Least squares means for STATE anxiety

African-American (n=109)		Caucasian (n=33)	
Male	Female	Male	Female
38.42	42.57	43.80	41.02



Table 15

Least squares means for TRAIT anxiety

African-American (n=109)		Caucasian (n=33)	
Male	Female	Male	Female
39.76	43.77	45.39	43.09





Table 16

Least squares means for chronic anxiety (TOTAL)

African-American (n=109)		Caucasian (n=33)	
Male	Female	Male	Female
8.72 <sup>B</sup>	11.96 <sup>B</sup>	10.88 <sup>B</sup>	16.47 <sup>A</sup>

Means with different superscripts are significantly different at the .05 level.



Table 17

Least squares means for conduct problems (CD) as predicted by EFFT

African-American (n=109)		Caucasian (n=33)	
Male	Female	Male	Female
2.16 <sup>A</sup>	1.75 <sup>B</sup>	1.86	1.51 <sup>B</sup>

Means with different superscripts are significantly different at the .05 level.



Table 18

Least squares means for conduct problems (CD) as predicted by ETHSCORE

African-American (n=109)		Caucasian (n=33)	
Male	Female	Male	Female
2.09 <sup>A</sup>	1.77 <sup>B</sup>	1.91	1.46 <sup>B</sup>

means with different superscripts are significantly different at the .05 level.



Figure 1: Prediction of STATE anxiety

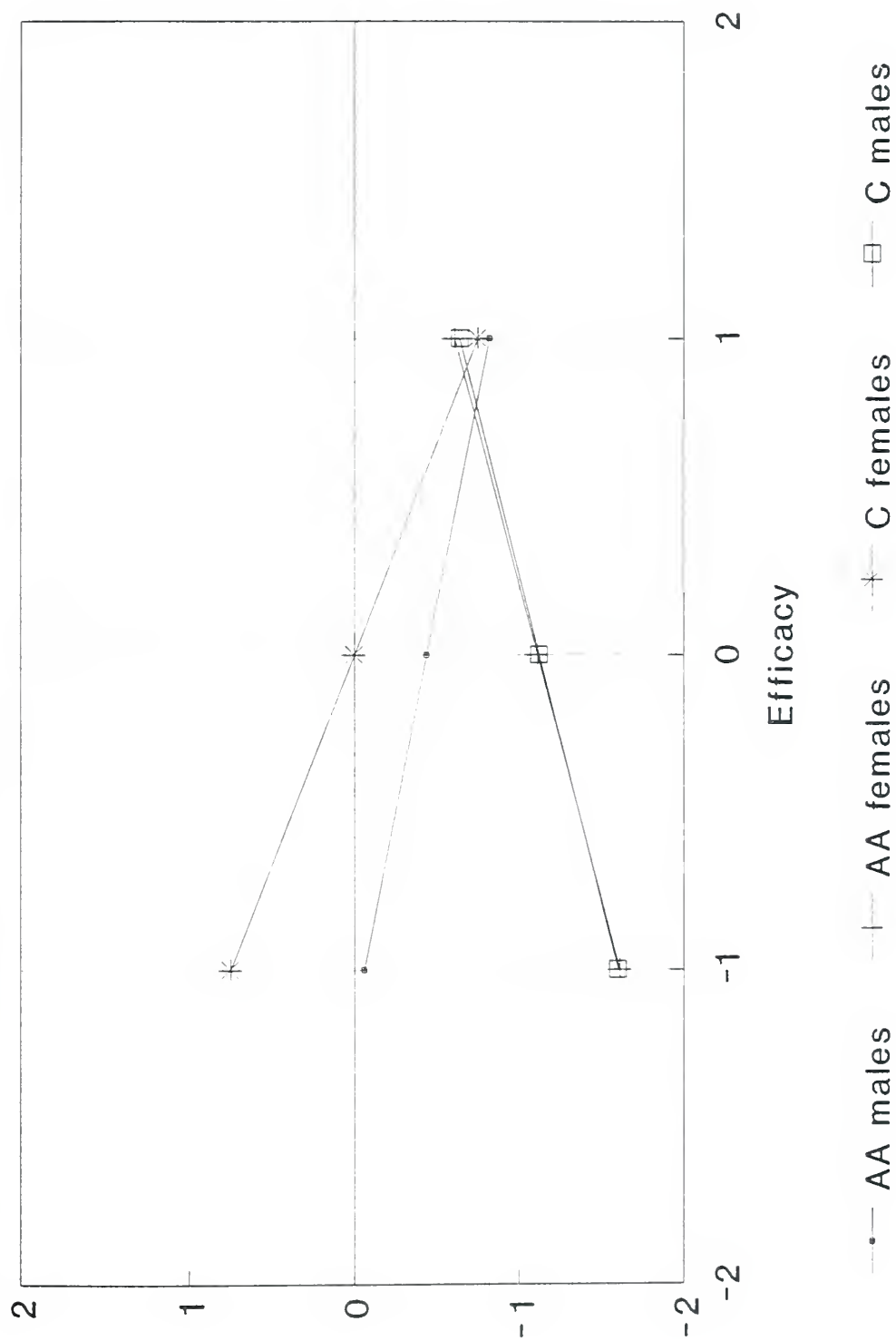






Figure 2 Prediction of STATE anxiety

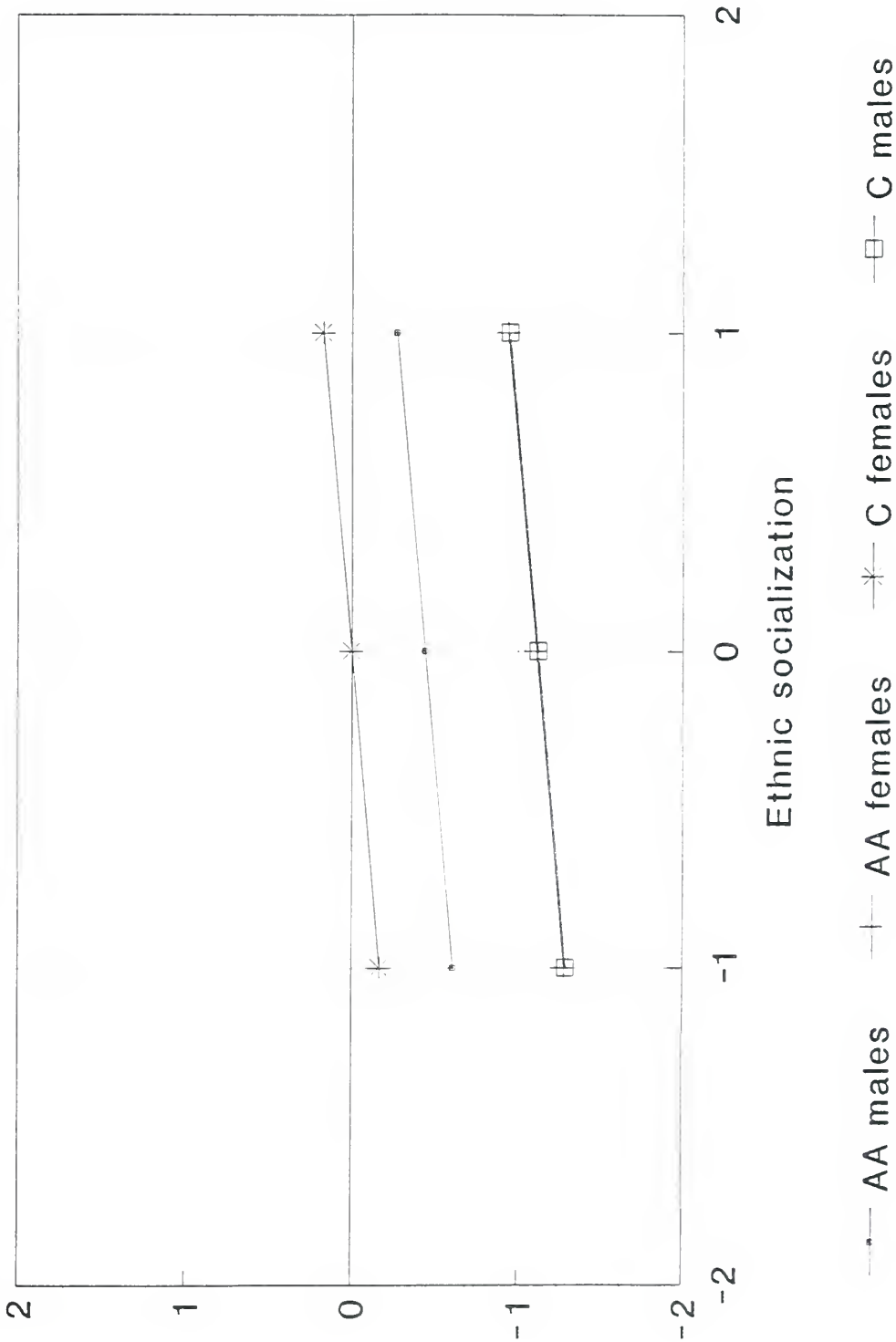




Figure 3: Prediction of TRAIT anxiety

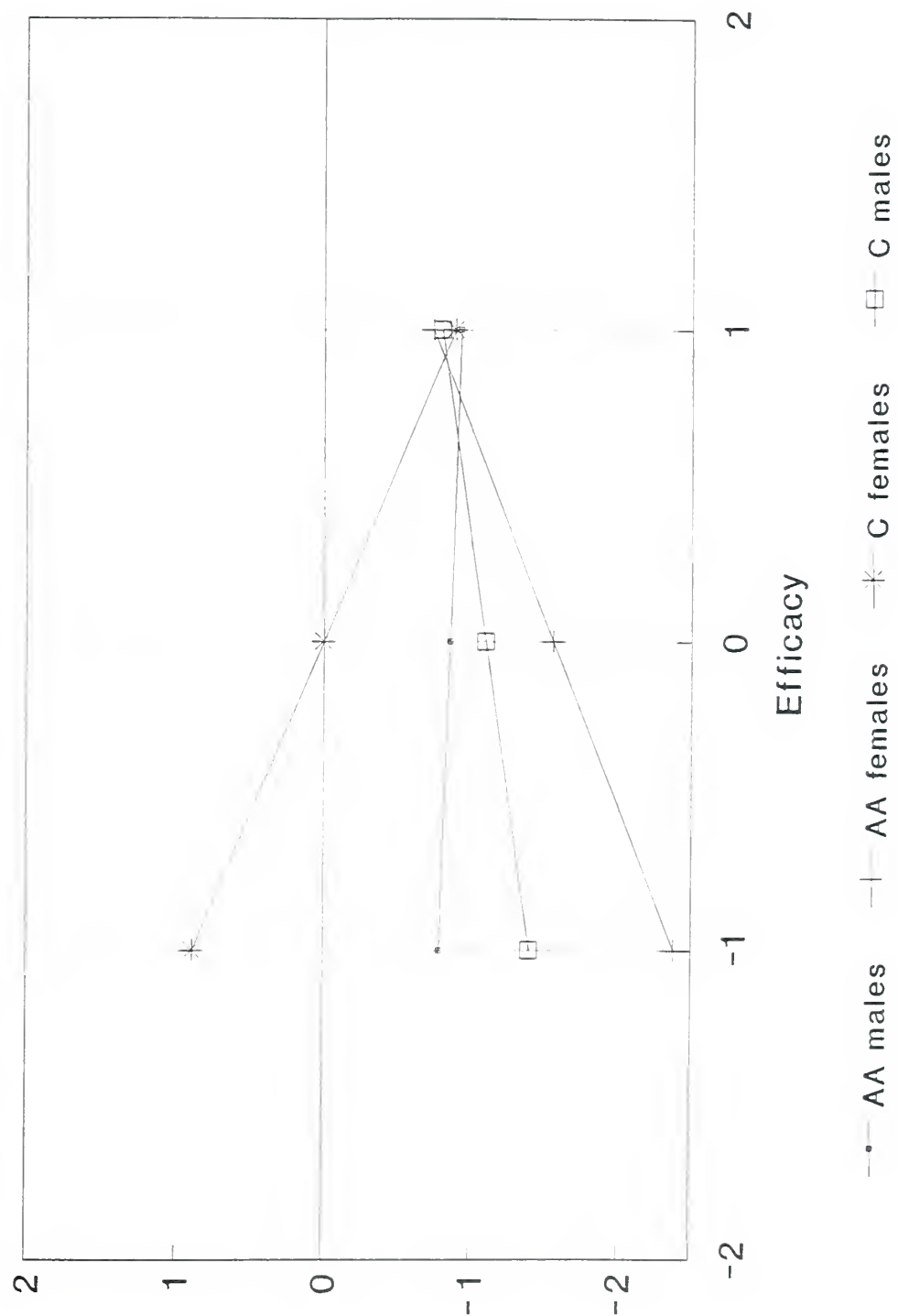




Figure 4: Prediction of TRAIT anxiety

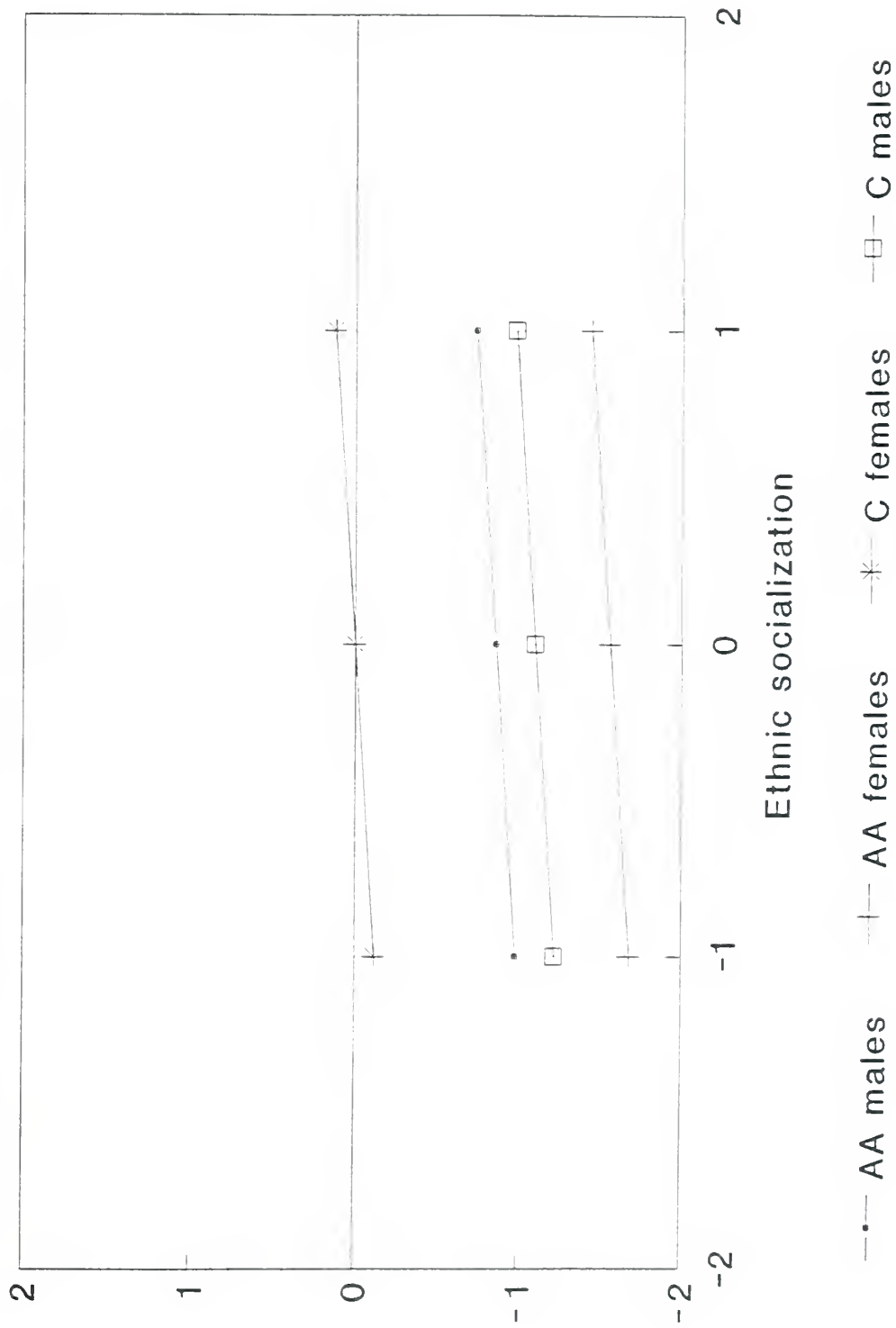




Figure 5: Prediction of chronic anxiety (TOTAL)

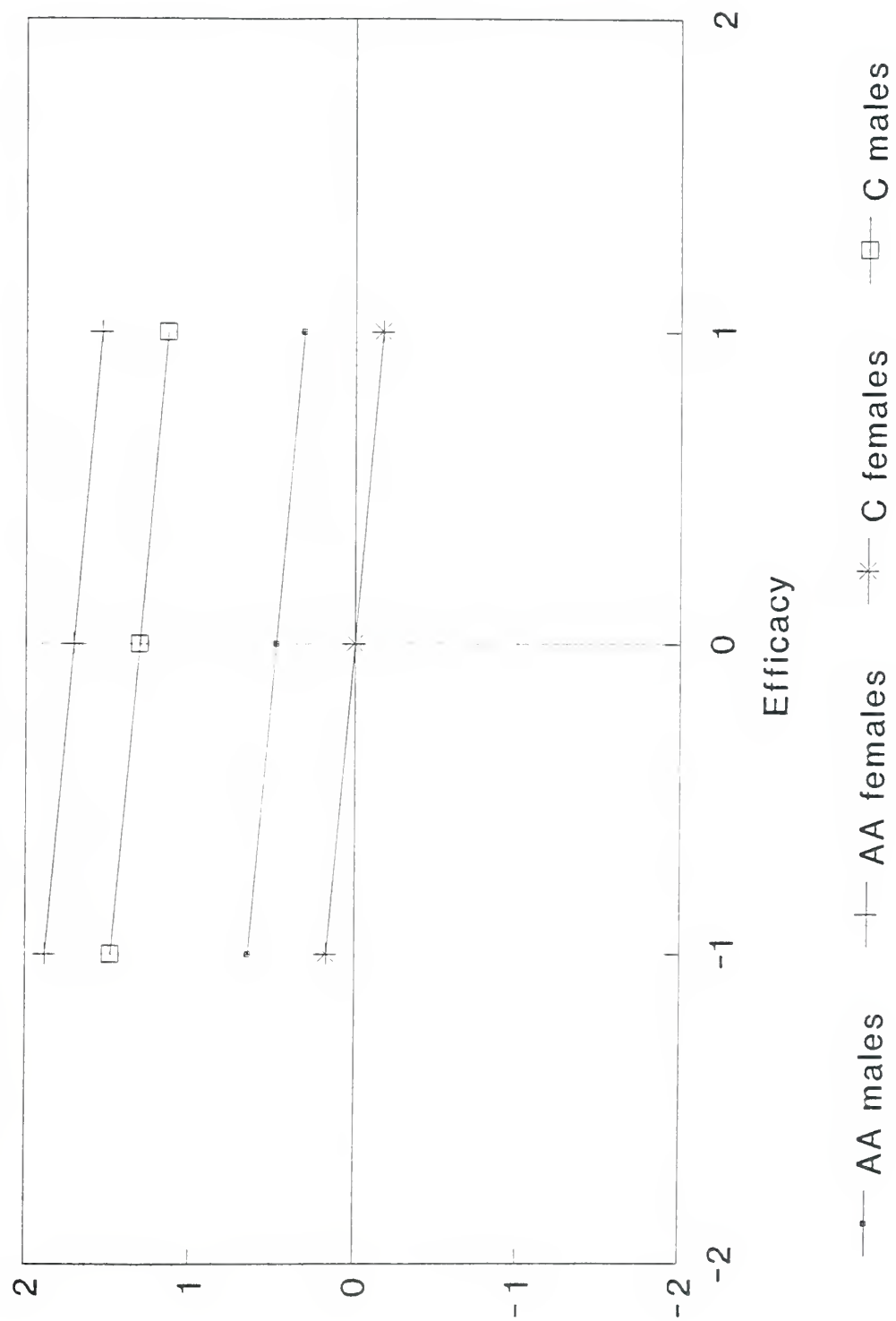






Figure 6: Prediction of chronic anxiety (TOTAL)

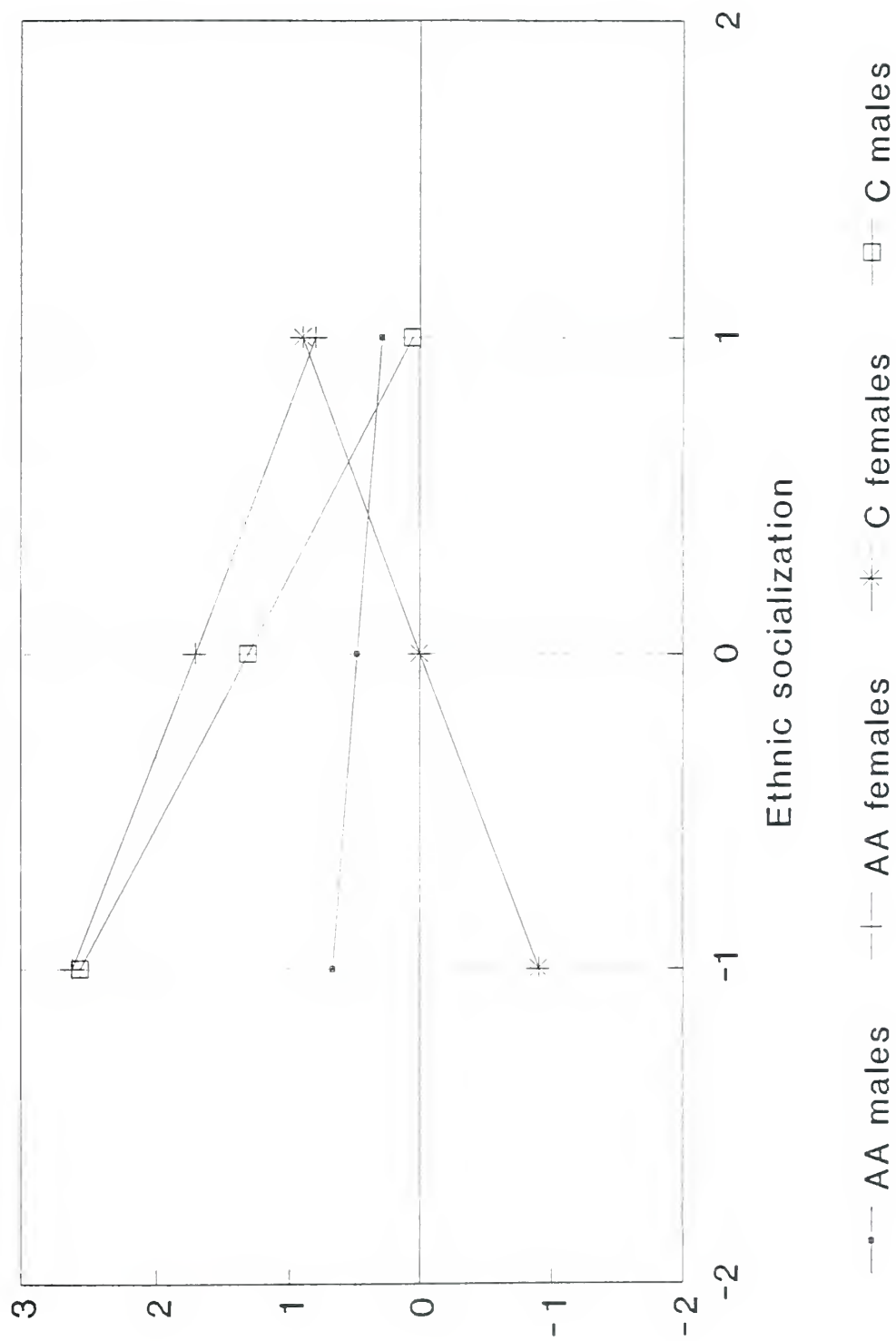




Figure 7: Prediction of conduct problems (CD)

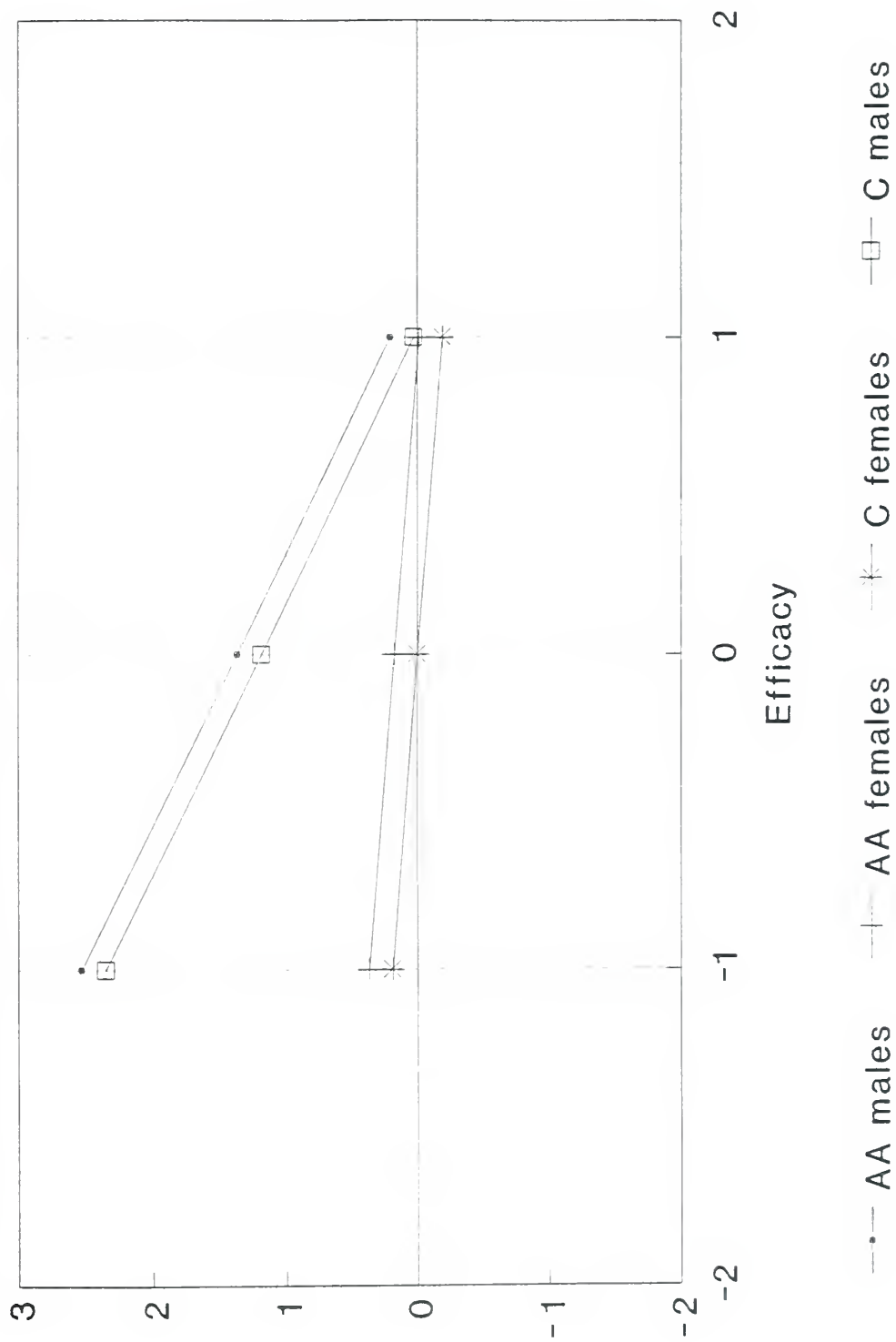
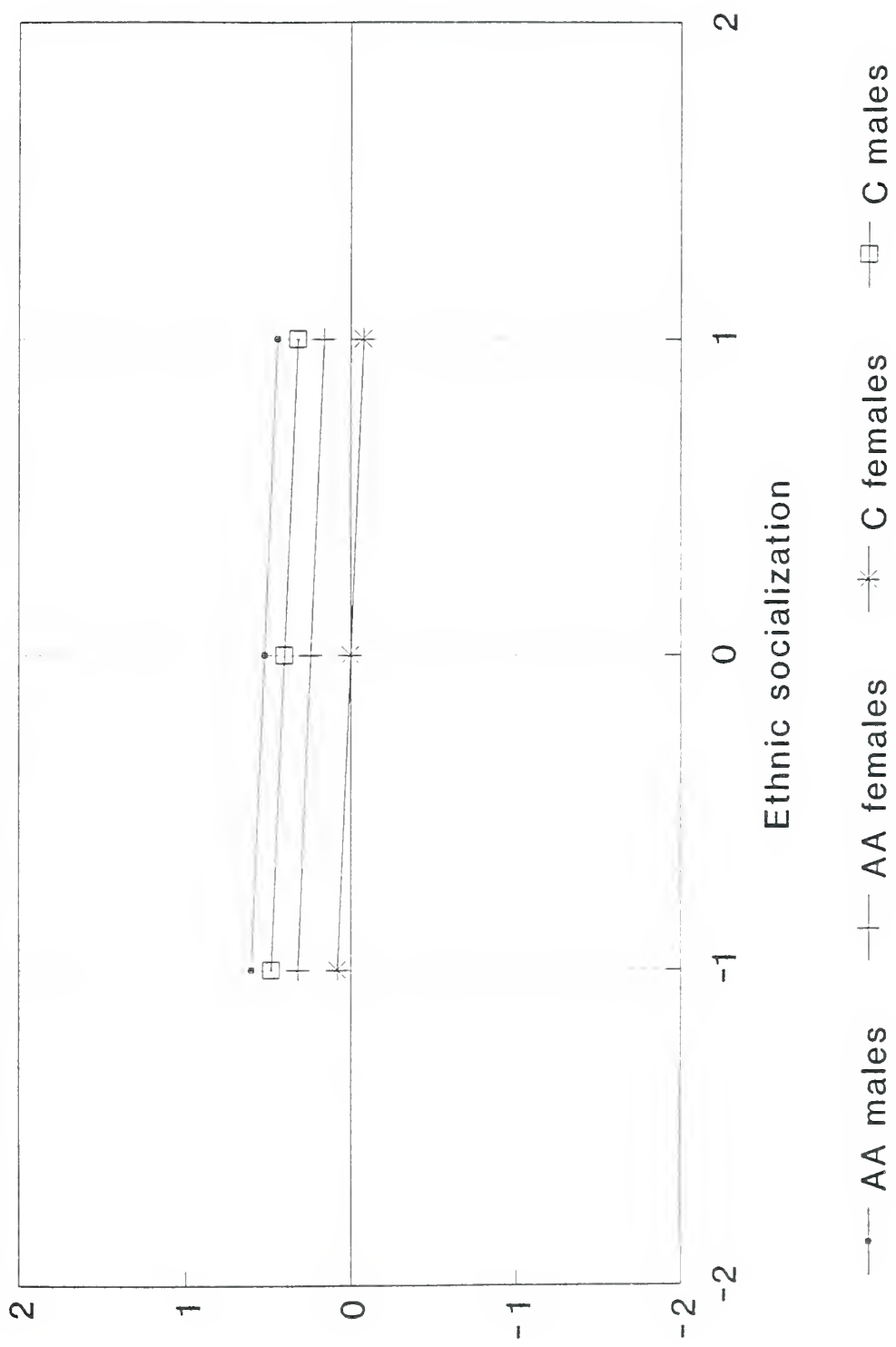




Figure 8: Prediction of conduct problems (CD)





## Appendix A Demographic Information

### STUDENT ATTITUDES RESEARCH STUDY

**Thank you for taking part in this study. We are very interested in the experiences and feelings of students like yourself so please answer as honestly as possible. First, we'd like to get some information about you so we can describe the kinds of students who took part in this study.**

1. When is your birthday?      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
    month     day     year
2. What grade are you in? \_\_\_\_\_
3. Are you male or female? (circle one) Male    Female
4. Who is your homeroom teacher? \_\_\_\_\_
5. What was your grade point average at the end of last school year in all classes  
     (e.g. 2.5 on a 4.00 scale) \_\_\_\_\_

If you don't know your GPA, you can list the letter grade you received in each required class (**math, English, science, Social Studies**) and each elective class that you took (e.g. art, band, P.E., woodshop, etc.).

English \_\_\_\_\_    Social Studies \_\_\_\_\_    science \_\_\_\_\_    math \_\_\_\_\_    foreign language \_\_\_\_\_  
 art \_\_\_\_\_    band \_\_\_\_\_    P.E. \_\_\_\_\_    woodshop \_\_\_\_\_  
 Other classes:    1 \_\_\_\_\_    2 \_\_\_\_\_    3 \_\_\_\_\_





6. What is the highest level of education that your mother (or female guardian) has completed?

1. Eighth grade or less
2. Some high school
3. High school graduate
4. Some technical or vocational school
5. Completed vocational or technical school
6. Some college
7. Two-year college graduate
8. Four year college graduate
9. Some post graduate
10. Post-graduate or professional degree
11. Not sure/don't know
12. Does not apply (e.g. don't live with mother or female guardian)

7. What is the highest level of education that your father (or male guardian) has completed?

1. Eighth grade or less
2. Some high school
3. High school graduate
4. Some technical or vocational school
5. Completed vocational or technical school
6. Some college
7. Two-year college graduate
8. Four year college graduate
9. Some post graduate
10. Post-graduate or professional degree
11. Not sure/don't know
12. Does not apply (e.g. don't live with father or male guardian)



8. What type of job does your mother (or female guardian) have? (circle one)

1. Not Currently Working
2. Laborer or unskilled worker (physical labor , housekeeping)
3. Service (cook, waiter, cosmetologist, cashier, maintenance)
4. Homemaker (full-time)
5. Skilled worker (construction, auto mechanic, factory worker)
6. Clerical sales (office work, word processor, typist, real estate)
7. Arts and entertainment (artist, singer, professional athlete)
8. Owner or manager of business (head of company, senior vice-president, entrepreneur)
9. Professional and technical (doctor, lawyer, teacher, scientist, engineer, nurse).
10. Don't know/ not sure
11. Other \_\_\_\_\_
12. Does not apply (e.g. don't live with mother or a female guardian)

9. What type of job does your father (or male guardian) have? (circle one)

1. Not Currently Working
2. Laborer or unskilled worker (physical labor , housekeeping)
3. Service (cook, waiter, cosmetologist, cashier, maintenance)
4. Homemaker (full-time)
5. Skilled worker (construction, auto mechanic, factory worker)
6. Clerical sales (office work, word processor, typist, real estate)
7. Arts and entertainment (artist, singer, professional athlete)
8. Owner or manager of business (head of company, senior vice-president, entrepreneur)
9. Professional and technical (doctor, lawyer, teacher, scientist, engineer, nurse)
10. Don't know/ not sure
11. Other \_\_\_\_\_
12. Does not apply (e.g. don't live with father or a male guardian)



### Multidimensional Self-Efficacy Scale

**Kids have to do a lot of things if they want to do well in school. Some of these things are easy to do and some of them are harder-even for the smartest kids. We would like to know about some of the things you might be able to do in school. Read each question and circle your answer next to the question. There are no right or wrong answers.**

		Not well at all		Not too well		Pretty well		Very well	
<b>How well could you:</b>									
10.	Finish homework assignments by deadlines?	1	2	3	4	5	6	7	
11.	Study when there are other interesting things to do?	1	2	3	4	5	6	7	
12.	Concentrate on school subjects?	1	2	3	4	5	6	7	
13.	Take good notes in all of your classes?	1	2	3	4	5	6	7	
14.	Use the library to get information for class assignments?	1	2	3	4	5	6	7	
15.	Plan your schoolwork?	1	2	3	4	5	6	7	
16.	Organize your schoolwork?	1	2	3	4	5	6	7	
17.	Remember information presented in class and textbooks?	1	2	3	4	5	6	7	
18.	Arrange a place to study without distractions?	1	2	3	4	5	6	7	
19.	Motivate yourself to do schoolwork?	1	2	3	4	5	6	7	
20.	Participate in class discussions?	1	2	3	4	5	6	7	
21.	Learn general mathematics?	1	2	3	4	5	6	7	
22.	Learn science?	1	2	3	4	5	6	7	
23.	Learn biology?	1	2	3	4	5	6	7	
24.	Learn reading and writing language skills?	1	2	3	4	5	6	7	
25.	Learn to use computers?	1	2	3	4	5	6	7	
26.	Learn foreign languages?	1	2	3	4	5	6	7	
27.	Learn social studies?	1	2	3	4	5	6	7	
28.	Learn English grammar?	1	2	3	4	5	6	7	
29.	Learn algebra?	1	2	3	4	5	6	7	



### Ethnic Socialization Scale

This country is made up of many different ethnic groups such as Black/African-American, Irish-American, Mexican-American, and many others. Write the name of your ethnic group

\_\_\_\_\_ OR if you want, you can write your race (e.g. white, black, etc.)

As they grow up, people learn a lot of things from their parents about the ethnic group they belong to. We'd like to know about some of the things you may have been taught by YOUR PARENTS about growing up as a member of your ethnic group. Please tell us how often your parents have told you the following things. Remember, there are no right or wrong answers.

Never      Rarely      Sometimes      Often      Very  
Often

#### HOW OFTEN HAVE YOUR PARENTS TOLD YOU

**People in our ethnic group...**

- |   | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 30. can go as far as they want in life if they get a good education?  | 1 | 2 | 3 | 4 | 5 |
| 31. should try to get along with people from other ethnic groups?   | 1 | 2 | 3 | 4 | 5 |
| 32. should not be prejudiced against all people from another ethnic group because of what some people in that group do? | 1 | 2 | 3 | 4 | 5 |

#### HOW OFTEN HAVE YOUR PARENTS TOLD YOU

**People in our ethnic group...**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 33. should understand that all people are equal no matter what ethnic group they belong to? | 1 | 2 | 3 | 4 | 5 |
| 34. can't get jobs as easily as people in other ethnic groups?                              | 1 | 2 | 3 | 4 | 5 |
| 35. should keep calm instead of getting mad when people call us names?                      | 1 | 2 | 3 | 4 | 5 |

#### HOW OFTEN HAVE YOUR PARENTS TOLD YOU

**People in our ethnic group...**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 36. make too much out of racial/ethnic issues?                         | 1 | 2 | 3 | 4 | 5 |
| 37. are not treated fairly no matter how much money they have?         | 1 | 2 | 3 | 4 | 5 |
| 38. should learn to use proper English if we want to get ahead in life | 1 | 2 | 3 | 4 | 5 |





	Never	Rarely	Sometimes	Often	Very Often
--	-------	--------	-----------	-------	------------

HOW OFTEN HAVE YOUR PARENTS  
TOLD YOU

**People in our ethnic group...**

- |     |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|
| 39. | should not depend on government programs to help us?                        | 1 | 2 | 3 | 4 | 5 |
| 40. | can't really trust people who belong to other ethnic groups?                | 1 | 2 | 3 | 4 | 5 |
| 41. | should not want to live or work with people from other ethnic groups?       | 1 | 2 | 3 | 4 | 5 |
| 42. | should learn about the ways of other ethnic groups, not just our own group? | 1 | 2 | 3 | 4 | 5 |

HOW OFTEN HAVE YOUR PARENTS  
TOLD YOU

**People in our ethnic group...**

- |     |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|
| 43. | should be proud of our color or heritage?   | 1 | 2 | 3 | 4 | 5 |
| 44. | can get ahead in life just by working hard?   | 1 | 2 | 3 | 4 | 5 |
| 45. | have to learn to deal with two worlds - a black world and a white world- if they want to get ahead? | 1 | 2 | 3 | 4 | 5 |

HOW OFTEN HAVE YOUR PARENTS  
TOLD YOU

**People in our ethnic group...**

- |     |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|
| 46. | have to be twice as good to compete with people from other ethnic groups? | 1 | 2 | 3 | 4 | 5 |
| 47. | should help out other people in our ethnic group whenever possible?       | 1 | 2 | 3 | 4 | 5 |
| 48. | should treat people from other ethnic groups as we want to be treated?    | 1 | 2 | 3 | 4 | 5 |

HOW OFTEN HAVE YOUR PARENTS  
TOLD YOU

**People in our ethnic group...**

- |     |  |   |   |   |   |   |
|-----|--|---|---|---|---|---|
| 49. | have more opportunities today than we did when your parents were children?     | 1 | 2 | 3 | 4 | 5 |
| 50. | should not tell people from other ethnic groups about our culture and beliefs? | 1 | 2 | 3 | 4 | 5 |



	Never	Rarely	Sometimes	Often	Very Often
<u>HOW OFTEN HAVE YOUR PARENTS TOLD YOU</u>					
<b>People in our ethnic group...</b>					
51. have fewer chances in life than people from other ethnic groups?	1	2	3	4	5
52. should go out of our way to support the causes, organizations, and institutions of our group?	1	2	3	4	5
53. should prefer to be with other people in our ethnic group?	1	2	3	4	5

HOW OFTEN HAVE YOUR PARENTS TOLD YOU ABOUT...

54. discrimination, unfair treatment, or other struggles they went through because of the ethnic group they belong to?	1	2	3	4	5
55. important contributions that members of your ethnic group have made in science, art , music, history, literature or politics?	1	2	3	4	5
56. discrimination, unfair treatment, or other struggles that famous people in your ethnic group went through because of their ethnicity?	1	2	3	4	5
57. unfair treatment or other struggles you may go through because of your ethnicity?	1	2	3	4	5

HOW OFTEN HAVE YOUR PARENTS TOLD YOU...

58. the Civil Rights Movement of the 1960's made things a lot better for people in our ethnic group?	1	2	3	4	5
59. getting a good education does not pay off for people in our ethnic group?	1	2	3	4	5
60. It doesn't matter what ethnic group you belong to, only how much money you have?	1	2	3	4	5



		Not at all important	Somewhat important	Very important	Does not apply (or not told)
	<b>How <u>important</u> to you is the information that your parents have told you about :</b>				
61.	Not trusting people from other ethnic groups	1	2	3	4
62.	Having to work harder than other ethnic groups to get ahead	1	2	3	4
63.	Not trusting other members of your <u>own</u> ethnic group.	1	2	3	4
64.	Getting along with people from other ethnic groups	1	2	3	4
65.	Being proud of the ethnic group you belong to	1	2	3	4
66.	Ways of behaving around members of other ethnic groups	1	2	3	4
67.	Supporting the causes of your ethnic group.	1	2	3	4
		Do <u>not</u> believe at all	Believe somewhat	Believe strongly	Does not apply (or not told)
	<b>Generally, how strongly do you <u>believe</u> the information that your parents have told you about:</b>				
68.	Not trusting people from other ethnic groups.	1	2	3	4
69.	Having to work harder than other ethnic groups to get ahead	1	2	3	4
70.	Not trusting members of your <u>own</u> ethnic group.	1	2	3	4



		Do <u>not</u> believe at all	Believe somewhat	Believe strongly	Does not apply (or not told)
	<b>Generally, how strongly do you <u>believe</u> the information that your parents have told you about:</b>				
71.	Getting along with people from other ethnic groups.	1	2	3	4
72.	Being proud of the ethnic group you belong to.	1	2	3	4
73.	Ways of behaving around members of other ethnic groups.	1	2	3	4
74.	Supporting the causes of your ethnic group.	1	2	3	4
		Do <u>not</u> follow at all	Follow sometimes	Follow most or all the time	Does not apply (or not told)
	<b>In your day to day life, how much do you <u>follow</u> information that your parents have told you about:</b>	1	2	3	4
75.	Not trusting people from other ethnic groups.	1	2	3	4
76.	Having to work harder than other ethnic groups to get ahead	1	2	3	4
77.	Not trusting other members of your own ethnic group.	1	2	3	4
78.	Getting along with people from other ethnic groups.	1	2	3	4
79.	Being proud of the ethnic group you belong to.	1	2	3	4
80.	Ways of behaving around members of other ethnic groups.	1	2	3	4
81.	Supporting the causes of your ethnic group.	1	2	3	4





### Revised Children's Manifest Anxiety Scale

Here are some sentences that tell how some people think and feel about themselves. Read each sentence carefully. Circle "Yes" if you think the sentence is true about you. Circle "No" if you think it is *not* true about you. Answer every question even if some are hard to decide. Do not circle both "Yes" and "No" for the same sentence. Remember, there are no right or wrong answers.

	Yes	No
82. I have trouble making up my mind.	1	0
83. I get nervous when things do not go the right way for me.	1	0
84. Others seem to do things easier than I can.	1	0
85. I like everyone I know.	1	0
86. Often I have trouble getting my breath.	1	0
87. I worry a lot of the time.	1	0
88. I am afraid of a lot of things.	1	0
89. I am always kind.	1	0
90. I get mad easily.	1	0
91. I worry about what my parents will say to me.	1	0
92. I feel that others do not like the way I do things.	1	0
93. I always have good manners.	1	0
94. It is hard for me to get to sleep at night.	1	0
95. I worry about what other people will think about me.	1	0
96. I feel alone even when there are people with me.	1	0
97. I am always good.	1	0
98. Often I feel sick to my stomach.	1	0
99. My feelings get hurt easily.	1	0
100. My hands feel sweaty.	1	0
101. I am always nice to everyone.	1	0
102. I am tired a lot.	1	0



**Circle “Yes” if you think the sentence is true about you. Circle “No” if you think it is *not* true about you. Do not circle both “Yes” and “No” for the same sentence. Remember, there are no right or wrong answers.**

	Yes	No
103. I worry about what is going to happen.	1	0
104. Other people are happier than I.	1	0
105. I tell the truth every single time.	1	0
106. I have bad dreams.	1	0
107. My feelings get hurt easily when I am fussed at.	1	0
108. I feel someone will tell me I do things the wrong way.	1	0
109. I never get angry.	1	0
110. I wake up scared some of the time.	1	0
111. I worry when I go to bed at night.	1	0
112. It is hard for me to keep my mind on my schoolwork.	1	0
113. I never say things I shouldn't.	1	0
114. I wiggle in my seat a lot.	1	0
115. I am nervous.	1	0
116. A lot of people are against me.	1	0
117. I never lie.	1	0
118. I often worry about something bad happening to me.	1	0

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## Reynolds Adolescent Depression Scale

Listed below are some sentences about how you feel. Read each sentence and decide how often you feel this way. Decide if you feel this way: *almost never*, *hardly ever*, *sometimes*, or *most of the time*. Circle the answer that best describes how you really feel. Remember, there are no right or wrong answers. Just choose the answer that tells how you usually feel.

	almost never	hardly ever	sometimes	most of the time
119. I feel happy.	1	2	3	4
120. I worry about school.	1	2	3	4
121. I feel lonely.	1	2	3	4
122. I feel my parents don't like me.	1	2	3	4
123. I feel important.	1	2	3	4
124. I feel like hiding from people.	1	2	3	4
125. I feel sad.	1	2	3	4
126. I feel like crying.	1	2	3	4
127. I feel that no one cares about me.	1	2	3	4
128. I feel like having fun with other students.	1	2	3	4
129. I feel sick.	1	2	3	4
130. I feel loved.	1	2	3	4
131. I feel like running away.	1	2	3	4
132. I feel like hurting myself.	1	2	3	4
133. I feel that other students don't like me.	1	2	3	4
134. I feel upset.	1	2	3	4
135. I feel life is unfair.	1	2	3	4
136. I feel tired.	1	2	3	4
137. I feel I am bad.	1	2	3	4
138. I feel I am no good.	1	2	3	4
139. I feel sorry for myself.	1	2	3	4



**Read each sentence and decide how often you feel this way. Decide if you feel this way: *almost never, hardly ever, sometimes, or most of the time*. Circle the answer that best describes how you really feel. Remember, there are no right or wrong answers. Just choose the answer that tells how you usually feel.**

		almost never	hardly ever	sometimes	most of the time
140.	I feel mad about things.	1	2	3	4
141.	I feel like talking to other students.	1	2	3	4
142.	I have trouble sleeping.	1	2	3	4
143.	I feel like having fun.	1	2	3	4
144.	I feel worried.	1	2	3	4
145.	I get stomachaches.	1	2	3	4
146.	I feel bored.	1	2	3	4
147.	I like eating meals.	1	2	3	4
148.	I feel like nothing I do helps anymore.	1	2	3	4

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## Self-Reported Delinquency and Drug Use (National Youth Survey)

Here are some behaviors that kids may or may not do. For each question, circle the answer that tells how many times **in the past year** you have done these behaviors. Please answer honestly.

	How many times <b>IN THE PAST YEAR</b> have you:	0 times	1 time	2 times	3 - 5 times	6 - 9 times	10 or more times
149.	Purposely damaged or destroyed property belonging to <u>your parents or other family members</u> (e.g. tore up something or broke something on purpose).	0	1	2	3	4	5
150.	Purposely damaged property belonging to a school.	0	1	2	3	4	5
151.	Purposely damaged other property that did not belong to you, not counting family members' or school property (e.g. tore up something in your neighborhood).	0	1	2	3	4	5
152.	<u>Tried</u> to steal something worth \$5 or less (e.g. candy or other food).	0	1	2	3	4	5
153.	<u>Actually</u> stolen something worth \$5 or less.	0	1	2	3	4	5
154.	<u>Tried</u> to steal something worth between \$5 and \$50	0	1	2	3	4	5
155.	<u>Actually</u> stolen something worth between \$5 and \$50	0	1	2	3	4	5
156.	<u>Tried</u> to steal something worth more than \$50 (e.g. stereo).	0	1	2	3	4	5
157.	<u>Actually</u> stolen something worth more than \$50.	0	1	2	3	4	5
158.	Tried to steal a car or motorcycle.	0	1	2	3	4	5
159.	<u>Actually</u> stolen a car or motorcycle.	0	1	2	3	4	5
160.	Skipped class without an excuse.	0	1	2	3	4	5
161.	Been suspended from school.	0	1	2	3	4	5
162.	Thrown objects such as rocks or bottles at cars or people.	0	1	2	3	4	5
163.	Run away from home (overnight).	0	1	2	3	4	5



	How many times <b>IN THE PAST YEAR</b> have you:	0 times	1 time	2 times	3 - 5 times	6 - 9 times	10 or more times
164.	Carried a weapon not including a gun (like a knife )	0	1	2	3	4	5
165.	Carried a gun.	0	1	2	3	4	5
166.	Attacked someone with the idea of seriously hurting or killing them.	0	1	2	3	4	5
167.	Been in gang fights.	0	1	2	3	4	5
168.	Sold marijuana ("blunt," "reefer," "pot.")	0	1	2	3	4	5
169.	Cheated on school tests.	0	1	2	3	4	5
170.	Stolen money or other things from your <u>parents</u> or other <u>family members</u> .	0	1	2	3	4	5
171.	<u>Threatened</u> to hit a teacher or other adult at school.	0	1	2	3	4	5
172.	<u>Actually</u> hit a teacher or other adult at school.	0	1	2	3	4	5
173.	<u>Threatened</u> to hit one of you <u>parents</u> .	0	1	2	3	4	5
174.	<u>Actually</u> hit one of your <u>parents</u> .	0	1	2	3	4	5
175.	Threatened to hit another <u>student</u> .	0	1	2	3	4	5
176.	<u>Actually</u> hit another student .	0	1	2	3	4	5
177.	Sold hard drugs like cocaine or crack.	0	1	2	3	4	5
178.	Used force to take money or things from other <u>students</u>	0	1	2	3	4	5
179.	Used force to take money or things from a <u>teacher, parent or other adult</u> .	0	1	2	3	4	5
180.	Used force to take things from other people not including students, teachers, or parents.	0	1	2	3	4	5
181.	Tried to break into a building to steal something or to look around.	0	1	2	3	4	5
182.	Tried to buy, sell, or hold onto items that your knew were stolen.	0	1	2	3	4	5



How many times <b>IN THE PAST YEAR</b> have you:		0 times	1 time	2 times	3 - 5 times	6 - 9 times	10 or more times
183.	Actually bought, sold or held onto items that you knew were stolen.	0	1	2	3	4	5
How many times <b><u>in the past year</u></b> have you used:		0 times	1 time	2 times	3 - 5 times	6 - 9 times	10 or more times
184.	Alcohol (e.g. beer, wine, malt liquor, wine coolers- not just one sip.)	0	1	2	3	4	5
185.	Marijuana ("reefer," "blunt," "pot".)	0	1	2	3	4	5
186.	Hallucinogens ("LSD," "Acid").	0	1	2	3	4	5
187.	Cocaine or crack ("coke," "rock").	0	1	2	3	4	5
188.	Heroin ("smack").	0	1	2	3	4	5
189.	Pills to get high ("uppers," "downers," "speed").	0	1	2	3	4	5



### State-Trait Anxiety Inventory

A number of statements which people use to describe themselves are given below. Read each statement and then circle the answer that tells how you feel *right now*, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

		Not at all	Somewhat	Moderately so	Very much so
190.	I feel calm.	1	2	3	4
191.	I feel secure.	1	2	3	4
192.	I am tense.	1	2	3	4
193.	I feel strained.	1	2	3	4
194.	I feel at ease.	1	2	3	4
195.	I feel upset.	1	2	3	4
196.	I am presently worrying over possible misfortunes.	1	2	3	4
197.	I feel satisfied.	1	2	3	4
198.	I feel frightened.	1	2	3	4
199.	I feel comfortable.	1	2	3	4
200.	I feel self-confident.	1	2	3	4
201.	I feel nervous.	1	2	3	4
202.	I am jittery.	1	2	3	4
203.	I feel indecisive.	1	2	3	4
204.	I am relaxed.	1	2	3	4
205.	I feel content.	1	2	3	4
206.	I am worried.	1	2	3	4
207.	I feel confused.	1	2	3	4
208.	I feel steady.	1	2	3	4
209.	I feel pleasant.	1	2	3	4

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A number of statements which people use to describe themselves are given below. Read each statement and then circle the answer that tells how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

		Almost never	Sometimes	Often	Almost always
210.	I feel pleasant.	1	2	3	4
211.	I feel nervous and restless.	1	2	3	4
212.	I feel satisfied with myself.	1	2	3	4
213.	I wish I could be as happy as others seem to be.	1	2	3	4
214.	I feel like a failure.	1	2	3	4
215.	I feel rested.	1	2	3	4
216.	I am "calm, cool, and collected."	1	2	3	4
217.	I feel that difficulties are piling up so that I cannot overcome them.	1	2	3	4
218.	I worry too much over something that really doesn't matter.	1	2	3	4
219.	I am happy.	1	2	3	4
220.	I have disturbing thoughts.	1	2	3	4
221.	I lack self-confidence.	1	2	3	4
222.	I feel secure.	1	2	3	4
223.	I make decisions easily.	1	2	3	4
224.	I feel inadequate.	1	2	3	4
225.	I am content.	1	2	3	4
226.	Some unimportant thought runs through my mind and bothers me.	1	2	3	4
227.	I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
228.	I am a steady person.	1	2	3	4
229.	I get in a state of tension or turmoil as I think over my recent concerns and interests.	1	2	3	4



## Appendix B

### Research Consent Form

#### ACADEMIC ATTITUDES RESEARCH STUDY

Dear Parent:

Your child's school is being invited to take part in a study conducted through Duke University that examines children's attitudes about school and adolescent behavior. The study is interested in finding out about feelings teenagers may have and behaviors they might do. The purpose of the study is to gather information that can help researchers understand the kinds of experiences that help children develop into well-adjusted adolescents and adults.

All of the children who agree to take part in the study will be asked to complete a survey about feelings they may have, attitudes about getting along in society, and attitudes about their school performance. Students will also be asked about personal behaviors including drug and alcohol use, fighting, and other behaviors they may or may not have done.

The survey takes about forty-five minutes to complete and will be filled out during homeroom period. The information we collect will be kept confidential. No names will be used on the surveys or in the final results of the study and no one at your child's school will see his/her responses.

We greatly appreciate your cooperation with this project. If you give your permission for your child to participate in this important project, please check "yes" on the enclosed permission slip and sign the form. Also, have your child complete the bottom of the permission slip and return the form to his or her homeroom teacher.

Participation in this project is voluntary and students may leave blank any questions which they do not wish to answer. If you and your child decide not to participate in the project the decision will not affect current or future educational services provided to your child.

If you have questions about the study, please feel free to contact Yolanda Van Horn at (919) 660-5688. Thank you for your participation.

Sincerely,

Yolanda V. Van Horn, M.A.



**ACADEMIC RESEARCH STUDY CONSENT FORM****PARENT PERMISSION**

\_\_\_\_\_ YES, I want my child to participate in the research study.

\_\_\_\_\_ NO, I do not want my child to participate in the research study.

\_\_\_\_\_  
Parent's Name

\_\_\_\_\_  
Child's Name

\_\_\_\_\_  
Parent's Signature

\_\_\_\_\_  
Date

**STUDENT CONSENT**

\_\_\_\_\_ YES, I want to take part in the research study.

\_\_\_\_\_ NO, I do not want to take part in the research study.

\_\_\_\_\_  
Student's Name

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date



Appendix C  
Ethnic Socialization Subscales  
Strategic Interracial Protocol

How often have your parents told you

People in our ethnic group...

1. can go as far as they want in life if they get a good education.
2. should try to get along with people from other ethnic groups.
3. should not be prejudiced against all people from another group because of what some people in the group do.
4. should understand that all people are equal no matter what group they belong to.
6. should keep calm instead of getting mad when people call us names.
9. should learn to use proper English if we want to get ahead in life.
13. should learn about the ways of other ethnic groups, not just our own group.
14. should be proud of our color or heritage.
15. can get ahead in life just by working hard.
18. should help out other people in our ethnic group whenever possible.
19. should treat people from other groups as we want to be treated.
20. have more opportunities today than we did when your parents were children.
23. should go out of our way to support the causes, institutions, and organizations of our group.
29. The Civil Rights Movement of the 1960's made things a lot better for people in our ethnic group.





Ethnic Socialization Subscales-continued

Distrust

How often have your parents told you

People in our ethnic group...

- 8. are not treated fairly no matter how much money they have.
- 11. can't really trust people who belong to other ethnic groups.
- 12. should not want to work or live with people from other ethnic groups.
- 17. have to be twice as good to compete with people from other ethnic groups.
- 21. should not tell people from other ethnic groups about our culture and beliefs.
- 22. have fewer chances in life than people from other ethnic groups.
- 24. should prefer to be with other people in our ethnic group.
- 30. getting a good education does not pay off for people in our ethnic group.
- 31. It doesn't matter what ethnic group you belong to, only how much money you have.

Collective Orientation/Ethnic Pride

How often have your parents told you

People in our ethnic group...

- 5. can't get jobs as easily as people in other ethnic groups.
- 7. make too much out of racial issues.
- 16. have to learn to deal with two worlds - a black world and a white world- if they want to get ahead.

How often have your parents told you about...

- 25. discrimination, unfair treatment, or other struggles they went through because of the ethnic group they belong to.
- 26. important contributions that members of your ethnic group have made in science, art, music, history, literature, or politics.
- 27. discrimination, unfair treatment, or other struggles that famous people in your ethnic group went through because of their ethnicity.



Ethnic Socialization Scale (continued)

Collective Orientation/Ethnic Pride

28. unfair treatment or other struggles you may go through because of your ethnicity.



## Appendix D

### Multidimensional Self-Efficacy Scale

#### Academic Self-Efficacy Subscales

##### Self-Efficacy for Self-Regulated Learning

How well could you:

1. finish homework assignments by deadlines.
2. study when there are other interesting things to do
3. concentrate on school subjects
4. take good notes in all of your classes
5. use the library to get information for class assignments
6. plan your school work
7. organize your school work
8. remember information presented in class and textbooks
9. arrange a place to study without distractions
10. motivate yourself to do schoolwork

##### Self-Efficacy for Academic Achievement

How well could you...

1. learn general mathematics
2. learn science
3. learn biology
4. learn reading and writing language skills
5. learn to use computers
6. learn foreign languages
7. learn social studies
8. learn English grammar



## Biography

Yolanda Vanessa Van Horn was born on September 28, 1967 in Washington, D.C. She attended Duke University where, in 1989, she completed a Bachelor of Science degree followed by a Master of Arts Degree in 1994. Both degrees were in the area of psychology. Ms. Van Horn is currently a doctoral candidate in psychology at Duke. As a doctoral student, she has received fellowships from the National Consortium for Educational Access and the Duke Endowment. Ms. Van Horn also completed a Predoctoral internship in psychology at Children's National Medical Center in Washington, D.C. Throughout her graduate career, she has combined teaching with research and clinical interventions in the areas of health psychology and developmental psychopathology. She has co-authored publications in the areas of health psychology and disruptive disorders in children.

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